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Results for Greenland halibut and American plaice of the Spanish survey in NAFO Div. 3NO for the period 1997-2009

by

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Abstract

Greenland halibut (*Reinhardtius hippoglossoides*) and American plaice (*Hippoglossoides platessoides*) indices from the bottom trawl survey that Spain carries out in Spring since 1995 in div. 3NO of the NAFO Regulatory Area are presented. Mean catch per town, biomass, length and age distributions for both species are presented since 1997, year in which the survey extended the depth strata. In 2001, the R/V *Vizconde de Eza* replaced the C/V *Playa de Menduíña* in the execution of the survey. We present the transformed to the R/V *Vizconde de Eza* series for the period 1997-2000, and the original obtained data for the period 2002-2009. In 2001, there are data from the two vessels. Greenland halibut biomass and abundance estimates present a decreasing trend since 1999, cut in year 2007 with a slight increase and a high increase in 2008 and 2009, reaching the higest value in the series. In last years it can be seen a presence of juveniles, mainly in 2004, but the greatest lengths have failed, although in 2009 there is a quite good presence of individulas of ages 6-7. For American plaice we can see an increasing trend along the whole period, reaching a maximum of biomass and number in 2006, following by the 2008 indices, cut in 2009 with a decrease in the indices, remains in a lower value than in the year 2003. The greatest recruitment in the presented series occurred in 2004 and we can follow their mode along the years, reaching its maximum in 2008.

Material and Methods

Since 1995, Spain carries out a Spring-Summer survey in the NAFO Regulatory Area of Div. 3NO on board the C/V *Playa de Menduíña* with a net trawl type *Pedreira*. In 2001, this vessel was replaced by the R/V *Vizconde de Eza*, using a trawl net type *Campelen*. To know more details about the technical specifications of the surveys, see Walsh *et al.*, 2001 and González Troncoso *et al.*, 2004.

The catch of each haul was sorted and weighted into species and a sample of each species was taken in order to measure the length distribution. For Greenland halibut and American plaice each individual of the sample was measured to the total length to the nearest lower cm. We present the indices for the period 1997-2009. In 1995 and 1996 only the less deep strata were surveyed, so these years are not representative for these species, thus they are not included in the analysis.

In Table 1, we present the number of valid tows, the depth strata covered and the dates of the survey series (1997-2009).

For each species, all the indices are presented transformed until 2000 and no-transformed in the period 2002-2009. In the year 2001, there are data transformed from the former vessel with original data from the new vessel. To know more about the transformation, see González-Troncoso *et al*., 2005 and González-Troncoso *et al*., 2006. We present per haul the mean catch, the stratified mean catch per tow and the biomass with their variance per year; the length distribution in number per haul stratified mean catches per length, sex and year; as well as the mean catches per tow age numbers with their mean length and mean weight by age. The age numbers were calculated starting from the stratified mean catches per haul length distribution applying the Age Length Key (ALK) for age-length keys. Weight at age was calculated by applying the length/weight relationship for each year to the mean length.

Due to technical problems in the vessel, this year two strata were not surveyed and six more have only one haul, so there are no standard deviations for these strata. As only one of these strata usually have catch of American plaice, this fact is not significant for the calculation of the final standard deviation for the mean weight per tow and biomass for this species. The same does not occur for Greenland halibut, as the strata are the deepest, so a recalculation must be made. So, for this species, to calculate the standard deviation, we put together the catch of the strata with only one haul in the same range of depth and calculate the standard deviation as if they were only one stratum. The total variance was calculated as usual with this single stratum.

Results

Greenland halibut

The Greenland halibut stock in Subarea 2 and Div. 3KLMNO is considered to be part of a biological stock complex, which includes Subareas 0 and 1. Abundance and biomass indices were available from research vessel surveys by Canada in Div. 2J+3KLMNO (1978-2008), EU in Div. 3M (1988-2008) and EU-Spain in Div. 3NO (1995-2008). In 2003 the Fisheries Commission implemented a fifteen year rebuilding plan for this stock, establishing progressively decreasing TACs. The catches in 2004-2008 have exceeded the rebuilding plan TACs by 30% on average, despite reductions in fishing effort.

The exploitable biomass (age 5+) was reduced to low levels in 1995-97 due to very high catches and high fishing mortality. It increased during 1998-2000 due to greatly reduced catches, much lower fishing mortality and improved recruitment. However, increasingly higher catches and fishing mortality since then accompanied by poorer recruitment has caused a subsequent decline. The current (2004-2008) estimates of exploitable biomass are amongst the lowest in the series. Recent recruitment has been far below average, and fishing mortality, although decreasing, remains high.

So, the exploitable biomass has been declining in recent years and is presently estimated to be at its lowest observed level. All recruiting year-classes since the 1996 year-class have been below average. Fishing mortality in ages 5-10 was very high in 1991-1994, then declined in 1995 and increased since then with some decline after 2003 (NAFO, 2009). Our results up to 2008 confirm these results presented by the Scientific Council last year.

Mean catches and Biomass

Table 2 shows the swept area, the tow number, the mean catches and their variance per haul and year for Greenland halibut. In Table 3 we present the mean weight per tow by stratum with the total variance per year and in Figure 1 we compare these data with the mean number per town. Table 4 and Figure 2 present the biomass per swept area per stratum and their total variance per year, as the biomass corresponding with the ages 5+ and 10+. In Table 5 we present the length-weight relationship parameters *a* and *b*.

Greenland halibut biomass decreased since the year 1999 to 2006, but since 2007 the biomass has increased, mainly in 2009, when the biomass reaches the highest value in the series. The lowest biomass value was in 2002. The biomass 5+ and 10+ have had the same trend as the total biomass with a marked increase these two last years, being in both cases the highest value of the series. Despite of this, with respect to the mean number per tow, although in the last years there is a substantial increase in the numbers, this increase is not as the increase in biomass, reaching the level of the 2001 numbers per town, but still far of the values of the first years of our series.

Length Distribution

Table 6 presents the stratified mean catches per haul length distribution for the Greenland halibut, by sex and year, with the number of samples in which there were length measures, the total number of individuals measured in these samples, the sampled catch and the range of lengths met, as the total catch of this species and the total hauls made in the survey. In Figures 3 and 4 we can follow the evolution along the years. We can follow a mode since 1997 until 2001, but since then no high new values appears. The highest recruitments were in 1997, 2001 and 2004. In 2006 and 2007 the small individuals (around 12-14 cm, corresponding to 1 year of age) are the mode of the length distribution range, but all the length ranges were poor. As we said before, despite of the high increase in the biomass in 2008 and 2009, we can no see a high increase in the numbers of individuals. This is because the increase of the biomass is due to a higher presence of individuals of lengths between 41 and 59 cms (ages 5-9), while at the beginning of the series the presence of juveniles was stronger.

Age numbers

We present the abundance at age per stratified mean catch by haul, by sex and by year in Table 7 and the total by year in Figure 5. Individuals between 0 and 20 years were caught in the period 1997-2009, and in last years (most since 2002) more number of younger individuals was caught. Perhaps it can be due to the change of gear and/or vessel. We can follow three conspicuous cohorts in our series, the 1994-1996 cohorts (ages 1, 2 and 3 in 1997). Cohorts from following years seem to be weaker than those ones, but more constant. And 2001-2003 cohorts appear to be quite strong, as we can see in recent years, particularly 2002 one, and these cohorts seem to be present in year 2008 (ages 5 to 7) and in 2009 (ages 6 to 8).

Mean length and mean weight

Mean length and weight at age by sex over time are presented in Tables 8 and 9, and shown in Figures 6 and 7. It seems that the greatest ages were increasing their mean length and weight until 2003, and falling in the youngest individuals. The mean length seems to be more stable than mean weight, at least for the youngest and the oldest individuals. In 2009 the mean length and weight have no great changes from the ones in 2008 except the oldest ages that have smaller values.

American plaice

There was no directed fishing of American plaice in 1994 and there has been a moratorium from 1995. Even under moratorium, catches increased substantially from 1995 to 2003 and then decreased, although the fishing mortality remains high. Biomass and SSB are very low compared to historic levels. SSB declined to the lowest estimated level in 1994 and 1995. It has increased since then but still remains very low. Recruitment has been generally poor for the past two decades; however, the 2003 year-class is the largest since the 1985 year-class (NAFO, 2009).

Mean catches and Biomass

American plaice haul mean catches by stratum are presented in Table 10, included swept area, number of hauls and SD. Mean weight per tow by stratum and year and their SD are presented in Table 11.
The entire time series (1997-2009) of biomass and their SD estimates of American plaice are presented in Table 12. Estimated parameters *a* and *b* values of length-weight distribution are presented in Table 13.

The American plaice indices show a general increasing trend along the years, agree with the results from the Canadian surveys. We can see a decreasing in 2001 and 2002, and an increasing since then, reaching the maximum historical value in 2006 and 2008, with a virtually identical value, remained in 2007 at the same level than in 2005. But in 2009 this increasing trend was broken and the value is below the 2001 value, both in weight and in numbers (Fig. 8 and 9).

Length Distribution

Table 14 and Figures 10 and 11 show the stratified mean numbers per tow length distribution by sex and year, besides the sampled size and its catch, for the period 1997-2009. The data have been grouped two by two**,** so we

present the data every two cm. Between the years 2000 and 2004 we can follow a cohort that then disappeared; probably the 1998 year-class. In 2004 there is a great presence of juveniles (8 cm), and in 2005 the mode appears around 14 cm, following with a mode of around 20 cm in 2006, 24 in 2007 26 in 2008 and 28 in 2009. In 2008, there is a quite good presence of juveniles (individuals of 10-12 cm) that do not appear in 2009, in which all the length classes are very poor.

Age numbers

We present the mean number per tow at age by sex and by year in Table 15 and the total by year in Figure 12. The ALK is the 3N Canadian one. In 2006 there were no data enough to make an ALK, so we use the sum of the ALKs for the period 1997-2005, separated by sexes. We can follow a cohort without problems since the year 2000, starting in individuals of 2 years old (1998 cohort), reaching 11 year old in 2009; a second cohort, weaker, can be followed since 1999, starting in 2 years old, too (1997 cohort). Another cohort from the year 2002 (one year old in 2003), can be followed until 2009, reaching 7 years old, although it failed at 5 years old. And the 2003 cohort (one year in 2004), is a very strong cohort, reaching in 2008 five years old and the largest number in the whole series, decreasing in 2009 at the age of six years but remains being the highest age in this year.

Mean length and mean weight

Mean length and weight at age by sex over time are presented in Tables 16 and 17, and shown in Figures 13 and 14. The mean length is more or less stable in all ages, at least since the year 2002. The same occurs with the mean weight, although with more variations. The major variations appear in the oldest ages studied: 12, 13, 14 and 15+ years old individuals. While for ages 12 and 13 the mean length and weight seem to increase since 2004, for ages 14 and 15+ the same means dropped. From 1997 to 1999 a general decreasing in the two means is observed.

Acknowledges

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References

González Troncoso, D., C. González and X. Paz. 2004. American plaice biomass and abundance from the surveys conducted by Spain in the NAFO Regulatory Area of Divisions 3NO, 1995-2003. NAFO SCR Doc. 04/09, Serial Number N4954, 22 pp.

González Troncoso, D., E. Román and X. Paz. 2004. Results for Greenland halibut from the surveys conducted by Spain in the NAFO Regulatory Area of Divisions 3NO, 1996-2003. NAFO SCR Doc. 04/11, Serial Number N4956, 16 pp.

González Troncoso, D., E. Román and X. Paz. 2005. Results for Greenland halibut of the Spanish survey in NAFO Divisions 3NO: Biomass, length distribution and age distribution for the period 1997-2004. NAFO SCR Doc. 05/27, Serial Number N5113, 18 pp.

González Troncoso, D., E. Román and X. Paz. 2006. Results for Greenland halibut and American plaice of the Spanish survey in NAFO Divisions 3NO: Biomass, length distribution and age distribution for the period 1997-2005. NAFO SCR Doc. 06/12, Serial Number N5227, 43 pp.

NAFO, 2009. Report of Scientific Council Meeting, 4-18 June 2009.

Walsh, J.S., X. Paz and P. Durán. 2001. A preliminary investigation of the efficiency of Canadian and Spanish Survey bottom trawls on the Southern Bank. NAFO SCR Doc., 01/74, Serial nº N4453, 18 pp.

TABLE 1.- Spanish spring bottom trawl surveys on NAFO Div. 3NO: 1997-2009

Year	Vessel	Valid tows	Depth strata covered (m)	Dates
1997	C/V *Playa de Menduíña*	128	42-1263	April 26-May 18
1998	C/V *Playa de Menduíña*	124	42-1390	May 06-May 26
1999	C/V *Playa de Menduíña*	114	41-1381	May 07-May 26
2000	C/V *Playa de Menduíña*	118	42-1401	May 07-May 28
2001(*)	R/V *Vizconde de Eza*	83	36-1156	May 03-May 24
	C/V *Playa de Menduíña*	121	40-1500	May 05-May 23
2002	R/V *Vizconde de Eza*	125	38-1540	April 29-May 19
2003	R/V *Vizconde de Eza*	118	38-1666	May 11-June 02
2004	R/V *Vizconde de Eza*	120	43-1539	June 06–June 24
2005	R/V *Vizconde de Eza*	119	47-1485	June 10–June 29
2005	R/V *Vizconde de Eza*	119	47-1485	June 10–June 29
2006	R/V *Vizconde de Eza*	120	45-1480	June 7–June 27
2007	R/V *Vizconde de Eza*	110	45-1374	May 29–June 19
2008	R/V *Vizconde de Eza*	122	45-1374	May 27–June 16
2009	R/V *Vizconde de Eza*	109	45-1374	May 31–June 18

(*) We took, for the calculation of the series, 83 hauls from the R/V *Vizconde de Eza* and 40 hauls from the C/V *Playa de Menduíña* (123 hauls in total)

TABLE 2.- Swept area, number of hauls and Greenland halibut mean catch (kg) and SD by stratum. Spanish Spring Surveys on NAFO Div. 3NO: 1997-2009. Swept area in square miles. n.s. means stratum not surveyed. 1997-2000 data are transformed C/V *Playa de Menduíña* data, and 2002-2009 data are original from R/V *Vizconde de Eza*. In 2001, there are data from the two vessels.

	1997				1998				1999				2000				2001			
Stratum	Swept area	Tow number	G. halibut Mean catch	G. halibut SD	Swept area	Tow number	G. halibut Mean catch	G. halibut SD	Swept area	Tow number	G. halibut Mean catch	G. halibut SD	Swept area	Tow number	G. halibut Mean catch	G. halibut SD	Swept area	Tow number	G. halibut Mean catch	G. halibut SD
353	0.0480	4	0.06	0.053	0.0465	4	1.37	1.274	0.0360	3	0.61	0.569	0.0356	3	0.19	0.178	0.0341	3	0.03	0.038
354	0.0233	2	0.70	0.095	0.0356	3	2.36	1.246	0.0218	2	0.86	0.781	0.0356	3	0.11	0.057	0.0338	3	3.22	1.927
355	0.0233	2	4.07	0.230	0.0221	2	0.29	0.066	0.0229	2	0.22	0.295	0.0233	2	0.22	0.274	0.0240	2	17.25	15.486
356	0.0225	2	4.11	1.871	0.0221	2	4.27	4.759	0.0229	2	0.23	0.174	0.0225	2	0.49	0.043	0.0240	2	0.07	0.042
357	0.0443	4	1.08	1.341	0.0240	2	8.40	6.433	0.0236	2	1.69	0.276	0.0124	1	0.11	-	0.0244	2	2.69	2.135
358	0.0563	5	1.38	1.168	0.0236	3	2.35	1.843	0.0349	3	4.10	3.155	0.0341	3	0.48	0.529	0.0345	3	8.46	12.298
359	0.0690	6	0.66	0.623	0.0698	6	0.22	0.185	0.0364	3	2.15	3.725	0.0469	4	1.35	2.014	0.0803	7	1.97	2.329
360	0.3754	32	0.04	0.183	0.2561	25	0.04	0.158	0.2325	19	0.31	0.918	0.2396	20	0.13	0.352	0.2423	20	0.17	0.484
374	0.0353	3	0.00	0.000	0.0353	3	0.05	0.080	0.0244	2	0.00	0.000	0.0240	2	0.00	0.000	0.0240	2	0.00	0.000
375	0.0116	1	0.00	-	0.0345	3	0.00	0.000	0.0236	2	0.00	0.000	0.0244	2	0.00	0.000	0.0338	3	0.00	0.000
376	0.1583	14	0.00	0.000	0.0930	10	0.00	0.000	0.1219	10	0.00	0.000	0.1200	10	0.00	0.000	0.1155	10	0.00	0.000
377	0.0116	1	0.00	-	0.0229	2	0.03	0.039	0.0240	2	0.48	0.683	0.0229	2	0.16	0.221	0.0229	2	0.42	0.537
378	0.0210	2	0.78	0.985	0.0120	2	0.66	0.873	0.0229	2	1.03	0.330	0.0233	2	1.09	1.214	0.0236	2	5.69	8.040
379	0.0206	2	2.23	1.031	0.0356	3	1.88	0.826	0.0236	2	0.96	0.013	0.0225	2	1.23	0.880	0.0229	2	4.61	4.236
380	0.0210	2	2.64	1.210	0.0113	2	2.48	2.022	0.0236	2	3.94	1.326	0.0236	2	2.42	1.447	0.0206	2	4.06	0.066
381	0.0221	2	0.21	0.009	0.0229	2	0.70	0.144	0.0229	2	2.82	0.985	0.0236	2	1.36	0.352	0.0236	2	0.90	1.271
382	0.0461	4	0.00	0.000	0.0229	3	0.04	0.064	0.0484	4	0.00	0.001	0.0499	4	0.12	0.147	0.0469	4	0.05	0.080
721	0.0221	2	2.98	1.053	0.0203	2	11.82	9.833	0.0244	2	0.62	0.249	0.0236	2	0.48	0.681	0.0248	2	0.40	0.431
722	0.0214	2	1.53	2.163	0.0101	2	24.84	1.628	0.0229	2	13.36	7.909	0.0218	2	19.49	9.977	0.0233	2	1.09	0.863
723	0.0210	2	5.16	2.543	0.0233	2	5.32	1.956	0.0229	2	11.07	10.916	0.0248	2	2.85	1.094	0.0240	2	1.33	0.240
724	0.0225	2	1.92	0.624	0.0206	2	8.40	1.044	0.0225	2	4.55	1.181	0.0233	2	5.83	2.179	0.0353	3	3.45	2.786
725	0.0206	2	7.85	4.225	0.0086	1	2.07	-	0.0229	2	4.97	5.763	0.0210	2	10.03	8.796	0.0116	1	2.67	0.522
726	n.s.	n.s.	n.s.	n.s.	0.0094	2	27.96	33.187	0.0225	2	29.04	26.314	0.0221	2	12.95	3.348	0.0116	1	3.65	1.200
727	0.0094	1	5.16	-	0.0233	2	7.80	6.754	0.0236	2	10.48	8.316	0.0210	2	2.65	1.181	0.0225	2	3.79	0.243
728	0.0214	2	36.24	23.055	0.0206	2	57.21	56.042	0.0233	2	62.32	12.655	0.0210	2	29.91	0.098	0.0229	2	8.62	1.654
752	0.0218	2	36.90	9.964	0.0229	2	54.22	23.669	0.0233	2	56.93	8.677	0.0206	2	23.33	1.989	0.0210	2	26.37	8.723
753	0.0214	2	32.43	8.270	0.0218	2	33.32	8.507	0.0229	2	64.23	4.417	0.0218	2	49.77	21.700	0.0214	2	22.66	4.883
754	0.0330	3	18.70	4.941	0.0210	2	17.32	4.706	0.0206	2	17.12	11.204	0.0195	2	46.69	14.381	0.0195	2	41.09	41.477
755	n.s.	n.s.	n.s.	n.s.	0.0206	2	19.07	0.177	0.0311	3	15.94	8.279	0.0431	4	35.73	20.076	0.0416	4	27.16	16.279
756	0.0109	1	68.36	-	0.0225	2	220.13	34.559	0.0225	2	125.28	46.721	0.0203	2	60.60	40.187	0.0113	1	30.10	16.124
757	0.0304	3	34.70	10.823	0.0206	2	95.25	21.628	0.0233	2	106.53	27.496	0.0214	2	37.41	10.108	0.0233	2	42.23	4.326
758	0.0214	2	39.36	23.502	0.0105	2	52.55	9.813	0.0214	2	52.72	11.736	0.0210	2	56.67	11.487	0.0218	2	42.11	8.828
759	n.s.	n.s.	n.s.	n.s.	0.0214	2	48.19	35.497	0.0218	2	44.72	44.096	0.0210	2	29.43	8.579	0.0221	2	76.11	21.890
760	0.0105	1	10.44	-	0.0214	2	32.89	28.743	0.0225	2	44.98	46.019	0.0210	2	30.56	2.862	0.0229	2	9.42	10.861
761	0.0315	3	61.90	36.985	0.0206	2	46.01	16.364	0.0210	2	37.88	1.004	0.0221	2	36.09	26.813	0.0225	2	8.10	7.778
762	0.0308	3	45.89	27.172	0.0094	2	38.22	15.038	0.0210	2	63.34	37.289	0.0203	2	36.37	1.726	0.0116	1	22.50	21.072
763	n.s.	n.s.	n.s.	n.s.	0.0218	2	35.02	27.312	0.0311	3	21.44	8.946	0.0416	4	25.64	21.799	0.0330	3	31.61	22.554
764	0.0206	2	20.63	2.422	0.0218	2	21.31	10.686	0.0225	2	28.81	12.412	0.0218	2	16.96	6.498	0.0240	2	53.64	1.888
765	0.0206	2	35.43	14.289	0.0098	2	22.82	3.131	0.0221	2	31.43	0.328	0.0203	2	37.13	30.587	0.0113	1	35.87	13.111
766	0.0308	3	62.87	9.784	0.0191	2	20.82	3.479	0.0218	2	31.31	20.000	0.0214	2	16.76	2.475	0.0203	2	16.42	9.557
767	n.s.	n.s.	n.s.	n.s.	0.0109	2	10.21	50.629	0.0214	2	25.90	9.786	0.0210	2	21.21	6.393	0.0218	2	5.72	2.593

TABLE 2 (cont.).- Swept area, number of hauls and Greenland halibut mean catch (kg) and SD by stratum. Spanish Spring Surveys on NAFO Div. 3NO: 1997-2009. Swept area in square miles. n.s. means stratum not surveyed. 1997-2000 data are transformed C/V *Playa de Menduíña* data, and 2002-2009 data are original from R/V *Vizconde de Eza*. In 2001, there are data from the two vessels.

	2002				2003				2004				2005			
Stratum	Swept area	Tow number	G. halibut Mean catch	G. halibut SD	Swept area	Tow number	G. halibut Mean catch	G. halibut SD	Swept area	Tow number	G. halibut Mean catch	G. halibut SD	Swept area	Tow number	G. halibut Mean catch	G. halibut SD
353	0.0476	4	0.21	0.278	0.0334	3	0.01	0.013	0.0338	3	1.44	2.395	0.0353	3	1.92	2.694
354	0.0356	3	0.85	0.839	0.0338	3	0.04	0.029	0.0345	3	1.51	2.160	0.0353	3	3.13	4.202
355	0.0236	2	0.43	0.467	0.0229	2	2.46	2.492	0.0229	2	4.02	5.119	0.0225	2	1.36	0.849
356	0.0233	2	1.40	1.131	0.0225	2	2.95	3.695	0.0221	2	3.35	3.873	0.0233	2	0.92	0.973
357	0.0240	2	1.15	1.626	0.0229	2	6.72	5.070	0.0229	2	1.50	0.521	0.0233	2	1.20	0.817
358	0.0345	3	3.20	0.819	0.0338	3	3.45	5.973	0.0330	3	0.94	0.438	0.0349	3	1.91	3.063
359	0.0686	6	0.28	0.219	0.0791	7	0.30	0.438	0.0791	7	1.18	2.137	0.0814	7	0.35	0.364
360	0.2865	25	0.00	0.007	0.2254	20	0.02	0.056	0.2310	20	0.11	0.459	0.2325	20	0.29	1.075
374	0.0345	3	0.00	0.000	0.0225	2	0.00	0.000	0.0233	2	0.00	0.005	0.0229	2	0.00	0.000
375	0.0353	3	0.00	0.000	0.0330	3	0.00	0.002	0.0338	3	0.00	0.000	0.0349	3	0.00	0.000
376	0.1140	10	0.00	0.000	0.1125	10	0.00	0.003	0.1166	10	0.00	0.000	0.1174	10	0.00	0.004
377	0.0229	2	0.00	0.001	0.0225	2	1.55	1.884	0.0218	2	0.07	0.011	0.0233	2	1.34	1.898
378	0.0233	2	1.85	0.636	0.0225	2	2.97	3.008	0.0225	2	0.38	0.530	0.0225	2	0.02	0.005
379	0.0229	2	5.85	4.313	0.0229	2	7.67	5.275	0.0124	1	2.60	-	0.0236	2	3.72	3.370
380	0.0225	2	5.05	3.041	0.0229	2	4.345	0.205	0.0221	2	10.3	0.424	0.0229	2	34.1	23.617
381	0.0229	2	0.5275	0.145	0.0229	2	1.06	1.188	0.0225	2	5.488	6.701	0.0233	2	6.248	3.948
382	0.0341	3	0.401	0.683	0.0454	4	0.045	0.061	0.0461	4	0.0575	0.068	0.0458	4	0.49	0.571
721	0.0233	2	0.08	0.062	0.0225	2	0.12	0.051	0.0221	2	1.92	0.693	0.0229	2	0.99	0.131
722	0.0236	2	2.63	2.906	0.0221	2	1.66	0.410	0.0218	2	24.04	23.144	0.0233	2	23.29	12.887
723	0.0233	2	1.24	1.075	0.0229	2	4.02	5.416	0.0229	2	3.85	3.755	0.0233	2	2.68	2.271
724	0.0225	2	4.75	1.202	0.0225	2	7.07	4.971	0.0214	2	12.45	3.182	0.0225	2	11.98	10.925
725	0.0225	2	7.35	6.718	0.0229	2	10.55	0.778	0.0225	2	19.57	19.537	0.0236	2	17.37	18.374
726	0.0214	2	3.25	3.323	0.0225	2	0.00	0.000	0.0225	2	14.71	1.287	0.0113	1	12.24	-
727	0.0233	2	2.01	1.400	0.0218	2	18.48	11.066	0.0233	2	20.47	10.281	0.0229	2	19.28	7.582
728	0.0229	2	7.93	10.986	0.0225	2	39.95	17.748	0.0180	2	5.70	4.950	0.0109	1	0.84	-
752	0.0116	1	0.34	-	0.0229	2	39.80	39.032	0.0214	2	4.64	5.424	0.0236	2	5.66	2.482
753	0.0229	2	2.45	3.465	0.0229	2	16.64	12.721	0.0218	2	4.37	0.820	0.0225	2	9.00	1.107
754	0.0341	3	20.33	4.996	0.0218	2	19.12	6.484	0.0214	2	3.21	0.007	0.0225	2	4.60	6.498
755	0.0338	3	0.46	0.655	0.0221	2	1.88	2.652	0.0319	3	2.64	4.567	0.0450	4	5.61	4.039
756	0.0229	2	10.55	14.920	0.0221	2	23.11	27.994	0.0218	2	14.99	4.609	0.0233	2	7.11	0.308
757	0.0225	2	9.95	2.192	0.0221	2	2.49	2.348	0.0218	2	4.55	6.435	0.0225	2	6.81	3.422
758	0.0225	2	17.15	1.485	0.0221	2	0.00	0.000	0.0214	2	9.73	3.714	0.0225	2	11.25	1.775
759	0.0225	2	2.15	3.041	0.0113	1	21.61	-	0.0214	2	4.43	3.203	0.0229	2	9.03	12.763
760	0.0229	2	4.75	4.172	0.0218	2	19.38	13.188	0.0221	2	14.63	7.958	0.0229	2	4.77	2.843
761	0.0225	2	16.65	16.900	0.0225	2	13.26	3.387	0.0221	2	2.92	1.996	0.0221	2	6.61	5.172
762	0.0225	2	2.11	1.563	0.0225	2	34.91	19.622	0.0233	2	8.44	4.349	0.0225	2	13.23	3.500
763	0.0225	2	0.74	1.047	0.0311	3	1.75	3.037	0.0326	3	20.78	9.792	0.0334	3	5.06	6.575
764	0.0236	2	6.95	5.869	0.0221	2	28.37	15.882	0.0229	2	33.78	29.165	0.0233	2	4.07	5.756
765	0.0236	2	45.90	39.739	0.0113	1	31.80	-	0.0225	2	20.98	8.464	0.0229	2	18.44	0.926
766	0.0233	2	9.53	1.025	0.0225	2	8.91	1.966	0.0225	2	8.46	11.958	0.0229	2	9.33	13.198
767	0.0225	2	0.85	1.202	0.0229	2	15.96	21.270	0.0218	2	1.26	1.782	0.0113	1	0.00	-

TABLE 2 (cont.).- Swept area, number of hauls and Greenland halibut mean catch (kg) and SD by stratum. Spanish Spring Surveys on NAFO Div. 3NO: 1997-2009. Swept area in square miles. n.s. means stratum not surveyed. 1997-2000 data are transformed C/V *Playa de Menduíña* data, and 2002-2009 data are original from R/V *Vizconde de Eza*. In 2001, there are data from the two vessels.

	2006				2007				2008				2009			
Stratum	Swept area	Tow number	G. halibut Mean catch	G. halibut SD	Swept area	Tow number	G. halibut Mean catch	G. halibut SD	Swept area	Tow number	G. halibut Mean catch	G. halibut SD	Swept area	Tow number	G. halibut Mean catch	G. halibut SD
353	0.0371	3	1.44	1.561	0.0364	3	0.04	0.014	0.0341	3	0.075	0.071	0.0345	3	0.052	0.045
354	0.0364	3	0.77	0.981	0.0364	3	4.90	7.475	0.0345	3	0.780	0.716	0.0338	3	0.000	0.000
355	0.0248	2	3.39	0.858	0.0240	2	1.97	2.242	0.0221	2	11.719	16.096	0.0233	2	0.025	0.035
356	0.0240	2	4.85	3.910	0.0240	2	1.74	1.725	0.0236	2	0.172	0.040	0.0229	2	0.000	0.000
357	0.0244	2	0.27	0.299	0.0360	3	7.31	7.944	0.0233	2	2.856	1.450	0.0116	2	1.647	0.610
358	0.0349	3	0.05	0.056	0.0368	3	0.44	0.445	0.0345	3	5.547	7.618	0.0341	3	0.024	0.029
359	0.0975	8	0.00	0.000	0.0855	7	0.02	0.030	0.0799	7	0.243	0.329	0.0795	7	0.000	0.000
360	0.2340	19	0.14	0.376	0.2378	20	0.00	0.008	0.2340	20	0.029	0.100	0.2273	20	0.014	0.045
374	0.0236	2	0.00	0.000	0.0240	2	0.00	0.000	0.0233	2	0.000	0.000	0.0225	2	0.000	0.000
375	0.0364	3	0.00	0.000	0.0364	3	0.00	0.000	0.0334	3	0.000	0.000	0.0341	3	0.000	0.000
376	0.1219	10	0.00	0.006	0.1185	10	0.00	0.003	0.1129	10	0.000	0.000	0.1133	10	0.081	0.253
377	0.0236	2	0.40	0.526	0.0240	2	0.00	0.006	0.0233	2	0.222	0.266	0.0225	2	0.072	0.022
378	0.0240	2	0.56	0.668	0.0233	2	0.39	0.516	0.0240	2	1.470	0.485	0.0229	2	0.012	0.017
379	0.0236	2	0.61	0.418	0.0240	2	2.06	0.862	0.0229	2	0.708	0.823	0.0229	2	0.270	0.382
380	0.0229	2	21.445	6.159	0.0240	2	5.673	7.770	0.0225	2	12.050	5.586	0.0229	2	1.409	0.836
381	0.0229	2	19.358	5.009	0.0240	2	0.7345	0.855	0.0229	2	2.859	4.018	0.0229	2	0.100	0.083
382	0.0469	4	3.712	3.749	0.0484	4	0.014	0.020	0.0458	4	0.038	0.069	0.0450	4	0.000	0.000
721	0.0236	2	0.51	0.714	0.0116	1	0.66	-	0.0225	2	1.791	1.154	0.0229	2	16.005	20.923
722	0.0240	2	1.75	2.468	0.0225	2	12.87	3.097	0.0206	2	16.244	3.406	0.0225	2	11.325	4.702
723	0.0236	2	6.89	3.149	0.0240	2	3.31	0.523	0.0225	2	1.652	0.457	0.0225	2	7.588	8.884
724	0.0233	2	22.49	13.740	0.0233	2	11.58	5.699	0.0221	2	4.603	2.784	0.0233	2	25.675	21.178
725	0.0233	2	11.81	2.819	0.0225	2	10.72	11.836	0.0229	2	0.005	0.006	0.0229	2	3.095	0.276
726	0.0225	2	2.36	1.146	0.0229	2	8.90	3.702	0.0225	2	6.194	4.514	0.0229	2	213.215	217.457
727	0.0225	2	8.80	2.121	0.0240	2	21.96	1.640	0.0221	2	64.950	17.890	0.0113	1	3.982	-
728	0.0225	2	4.36	0.836	0.0225	2	18.98	21.814	0.0221	2	21.700	12.445	0.0229	2	32.950	2.333
752	0.0225	2	6.10	0.898	0.0225	2	5.34	7.552	0.0218	2	17.900	7.071	0.0229	2	130.950	130.178
753	0.0225	2	4.06	4.380	0.0225	2	6.99	7.792	0.0221	2	18.795	7.785	0.0116	1	45.100	-
754	0.0225	2	0.65	0.919	0.0225	2	20.96	1.612	0.0218	2	24.450	11.809	0.0113	1	113.100	-
755	0.0338	3	4.12	5.260	0.0338	3	7.30	2.970	0.0431	4	26.838	13.282	0.0116	1	27.600	-
756	0.0229	2	6.54	6.739	0.0225	2	16.63	17.637	0.0218	2	38.650	7.849	0.0225	2	18.850	0.919
757	0.0225	2	5.58	1.520	0.0229	2	35.49	37.929	0.0221	2	34.185	16.426	0.0229	2	58.216	21.898
758	0.0225	2	13.44	14.665	0.0225	2	22.09	15.330	0.0218	2	44.710	19.361	0.0225	2	61.750	3.182
759	0.0225	2	0.46	0.651	n.s.	n.s.	n.s.	n.s.	0.0221	2	53.289	44.8461	0.0113	1	140.080	-
760	0.0225	2	8.97	6.672	0.0233	2	16.31	5.706	0.0225	2	26.785	5.197	0.0229	2	40.025	21.602
761	0.0233	2	5.18	3.603	0.0225	2	13.82	2.440	0.0214	2	13.611	12.464	0.0225	2	44.265	20.457
762	0.0233	2	16.55	21.529	n.s.	n.s.	n.s.	n.s.	0.0214	2	27.274	24.0473	0.0225	2	53.850	9.4045
763	0.0225	2	7.07	2.920	n.s.	n.s.	n.s.	n.s.	0.0311	3	19.762	14.3780	n.s.	n.s.	n.s.	n.s.
764	0.0233	2	13.46	2.380	0.0225	2	18.67	4.197	0.0221	2	19.406	9.965	0.0116	1	17.340	-
765	0.0236	2	13.00	14.333	0.0225	2	24.07	8.167	0.0214	2	26.025	19.311	0.0225	2	53.062	29.470
766	0.0229	2	3.69	2.534	n.s.	n.s.	n.s.	n.s.	0.0218	2	12.829	7.8772	0.0225	2	10.415	1.011
767	0.0233	2	0.80	1.131	n.s.	n.s.	n.s.	n.s.	0.0214	2	6.409	4.6528	n.s.	n.s.	n.s.	n.s.

TABLE 3.- Stratified mean catches (Kg) by stratum and year and SD by year of Greenland halibut (1997-2009). n.s. means stratum not surveyed. 1997-2000 data are transformed C/V *Playa de Menduíña* data (by FPC). 2002-2009 data are original from R/V *Vizconde de Eza*. In 2001, there are data from the two vessels.

Stratum	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
353	15.61	368.31	164.80	50.27	7.17	57.16	2.06	387.99	516.48	386.10	10.76	20.18	14.08
354	171.84	581.54	211.23	27.55	792.94	209.92	10.33	371.38	769.98	188.27	1204.25	191.88	0.00
355	301.21	21.29	16.18	16.14	1276.50	31.86	181.89	297.48	100.64	251.12	145.41	867.17	1.85
356	193.06	200.47	10.97	23.25	3.29	65.80	138.51	157.52	43.33	227.86	81.78	8.08	0.00
357	176.36	1377.73	277.07	17.81	441.16	188.60	1101.26	246.25	197.05	45.02	1199.33	468.30	270.11
358	310.53	529.11	921.77	108.61	1903.50	720.00	776.85	212.40	430.50	10.58	98.18	1248.08	5.48
359	279.62	94.44	905.35	568.81	827.57	116.83	125.94	495.40	145.85	0.00	8.06	102.30	0.00
360	120.66	100.23	852.78	358.57	461.98	5.79	49.54	314.48	795.80	379.37	4.87	79.32	40.21
374	0.00	9.93	0.00	0.00	0.00	0.00	0.00	0.75	0.00	0.00	0.00	0.00	0.00
375	0.00	0.00	0.00	0.00	0.00	0.00	0.36	0.00	0.00	0.00	0.00	0.00	0.00
376	0.00	0.00	0.00	0.00	0.00	0.00	1.73	0.00	1.60	2.40	1.60	0.00	108.32
377	0.00	2.78	48.27	15.59	42.00	0.10	154.80	7.40	134.20	39.80	0.40	22.20	7.15
378	108.38	92.26	143.03	151.61	790.22	257.15	413.25	52.13	2.71	77.49	53.52	204.33	1.67
379	236.64	199.42	101.35	130.87	488.13	620.10	813.02	275.60	394.00	64.50	218.41	75.05	28.62
380	253.84	237.93	377.84	232.32	389.43	484.80	417.12	988.80	3273.60	2058.72	544.61	1156.80	135.26
381	30.54	100.25	406.36	196.29	129.93	75.96	152.64	790.27	899.71	2787.55	105.77	411.62	14.33
382	0.00	12.74	0.16	42.51	16.16	137.54	15.44	19.72	168.07	1273.22	4.80	13.12	0.00
721	193.53	768.09	40.40	31.32	25.68	5.23	7.54	124.80	64.51	32.83	42.90	116.42	1040.33
722	128.46	2086.59	1122.44	1637.46	91.56	220.50	139.44	2018.94	1956.15	146.58	1081.08	1364.45	951.30
723	799.62	824.44	1715.78	441.21	206.15	192.20	623.18	596.29	414.78	1068.42	513.05	256.06	1176.14
724	237.69	1041.12	564.01	722.86	427.80	589.00	876.06	1543.80	1484.90	2788.45	1435.92	570.71	3183.70
725	824.43	217.35	521.45	1052.65	280.46	771.75	1107.75	2054.33	1823.59	1239.74	1125.44	0.47	324.98
726	n.s.	2013.07	2090.94	932.35	262.92	234.00	0.00	1059.12	880.92	169.56	640.62	445.97	15351.48
727	495.47	749.00	1006.54	253.97	364.03	192.96	1773.60	1965.12	1850.98	844.80	2108.16	6235.20	382.27
728	2826.86	4462.31	4861.26	2333.24	672.64	618.66	3116.10	444.60	65.52	340.00	1480.09	1692.60	2570.10
752	4833.71	7102.82	7457.90	3056.49	3454.13	1731.75	5213.80	607.19	740.81	798.45	699.54	2344.90	17154.45
753	4475.84	4597.53	8863.93	6868.76	3126.94	338.10	2295.63	603.06	1242.35	560.69	964.62	2593.71	6223.80
754	3365.21	3117.02	3081.94	8403.69	7396.15	3141.00	3440.70	576.90	827.10	117.00	3772.80	4401.00	20358.00
755	n.s.	7342.42	6136.26	13757.44	10457.90	155.28	721.88	1015.12	2160.81	1585.43	2811.78	10332.44	10626.00
756	6904.11	22233.50	12653.16	6121.02	3040.24	1065.55	2333.61	1514.09	718.36	660.04	1679.73	3903.65	1903.85
757	3539.38	9715.91	10866.31	3815.73	4307.61	1014.90	253.98	464.10	694.62	568.65	3619.98	3486.87	5937.98
758	3896.21	5202.82	5218.91	5610.39	4168.97	1697.85	0.00	962.87	1113.26	1330.56	2186.91	4426.29	6113.25
759	n.s.	6119.66	5679.93	3737.70	9666.37	273.05	2744.47	561.98	1146.18	58.42	n.s.	6767.70	17790.16
760	1608.22	5065.54	6926.79	4706.01	1450.68	731.50	2983.75	2252.64	734.58	1381.07	2510.97	4124.89	6163.85
761	10584.19	7867.63	6477.12	6170.76	1385.10	2847.15	2266.61	499.58	1129.80	885.01	2362.37	2327.40	7569.32
762	9728.04	8102.93	13428.13	7711.31	4769.98	446.26	7399.86	1788.22	2803.70	3509.24	n.s.	5782.09	11416.20
763	n.s.	9139.92	5595.80	6691.10	8250.35	193.14	457.62	5422.71	1319.79	1846.44	n.s.	5157.80	n.s.
764	2063.07	2131.30	2880.87	1695.94	5363.50	695.00	2837.00	3377.75	407.00	1345.70	1866.75	1940.60	1734.00
765	4392.98	2829.86	3897.46	4604.20	4447.98	5691.60	3943.20	2600.90	2285.94	1611.38	2984.06	3227.10	6579.63
766	9053.27	2998.23	4508.03	2413.42	2364.63	1371.60	1283.04	1217.59	1343.88	531.07	n.s.	1847.38	1499.76
767	n.s.	1613.33	4092.64	3351.32	904.20	134.30	2521.68	199.08	0.00	126.40	n.s.	1012.62	n.s.
L	72149	121271	124125	98061	84456	27324	52695	38088	35083	31338	37569	79227	146677
$\overline{Y}$	7.73	11.73	12.00	9.48	8.17	2.64	5.10	3.68	3.39	3.03	3.98	7.66	14.78
S.D.	0.62	0.89	1.00	0.75	0.84	0.45	0.61	0.40	0.36	0.42	0.44	0.74	1.73

TABLE 4.- Survey estimates (by the swept area method) of Greenland halibut biomass (t) and SD by stratum and year on NAFO Div. 3NO. n.s. means stratum not surveyed. 1997-2000 data are transformed C/V *Playa de Menduíña* data. 2001-2009 data are original from R/V *Vizconde de Eza*. In 2001, there are data from the two vessels. The last two rows present the biomass corresponding to set of ages 5+ and 10+.

Stratum	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
353	1	32	14	4	1	5	0	34	44	31	1	2	1
354	15	49	19	2	70	18	1	32	66	16	99	17	0
355	26	2	1	1	106	3	16	26	9	20	12	78	0
356	17	18	1	2	0	6	12	14	4	19	7	1	0
357	16	115	23	1	36	16	96	22	17	4	100	40	46
358	28	46	79	10	165	63	69	19	37	1	8	109	0
359	24	8	75	49	72	10	11	44	13	0	1	9	0
360	10	9	70	30	38	1	4	27	68	31	0	7	4
374	0	1	0	0	0	0	0	0	0	0	0	0	0
375	0	0	0	0	0	0	0	0	0	0	0	0	0
376	0	0	0	0	0	0	0	0	0	0	0	0	10
377	0	0	4	1	4	0	14	1	12	3	0	2	1
378	10	8	13	13	67	22	37	5	0	6	5	17	0
379	23	17	9	12	43	54	71	22	33	5	18	7	3
380	24	21	32	20	38	43	36	89	286	180	45	103	12
381	3	9	36	17	11	7	13	70	77	244	9	36	1
382	0	1	0	3	1	12	1	2	15	109	0	1	0
721	17	76	3	3	2	0	1	11	6	3	4	10	91
722	12	195	98	151	8	19	13	186	168	12	96	132	85
723	76	71	150	36	17	17	54	52	36	90	43	23	105
724	21	101	50	62	36	52	78	144	132	240	124	52	274
725	80	25	46	100	24	69	97	183	154	107	100	0	28
726	n.s.	195	186	84	22	22	0	94	78	15	56	40	1342
727	53	64	85	24	32	17	163	169	162	75	176	564	34
728	265	433	418	222	59	54	277	49	6	30	132	153	225
752	444	621	642	296	329	151	456	57	63	71	62	216	1500
753	419	423	775	632	293	30	201	55	110	50	86	234	535
754	306	297	299	862	758	275	316	54	74	10	335	405	1810
755	n.s.	712	591	1276	1005	14	65	96	192	141	250	958	914
756	635	1976	1125	605	266	93	211	139	62	58	149	359	169
757	350	942	935	357	371	90	23	43	62	51	317	315	519
758	365	478	488	534	383	151	0	90	99	118	194	407	543
759	n.s.	573	522	356	874	24	244	53	100	5	n.s.	612	1581
760	153	474	616	448	127	64	274	204	64	123	216	367	539
761	1008	763	617	558	123	253	201	45	102	76	210	218	673
762	949	786	1279	762	424	40	658	154	249	302	n.s.	541	1015
763	n.s.	840	539	643	750	17	44	499	119	164	n.s.	497	n.s.
764	200	196	256	156	447	59	256	295	35	116	166	175	149
765	426	270	352	455	402	482	351	231	200	136	265	302	585
766	883	314	415	226	233	118	114	108	117	46	n.s.	170	133
767	n.s.	146	383	319	83	12	220	18	0	11	n.s.	95	n.s.
TOTAL	6859	11305	11246	9331	7721	2380	4701	3437	3071	2720	3286	7272	12927
S.D.	546	860	973	707	790	410	575	373	325	379	363	708	1506
Biomass 5+	4303	6284	6367	8785	6700	2011	3386	2318	2585	2151	3057	6908	11971
Biomass 10+	406	504	660	1111	741	279	495	318	380	182	343	798	1134

TABLE 5.- Length weight relationships in the calculation of Greenland halibut biomass. The equation is $Weight = a(l + 0.5)^b$ Spanish Spring Surveys on NAFO Div. 3NO: 1997-2009. To calculate the parameters for the indeterminate individuals, we used the total data (males + females + indeterminate individuals). *E* means Error.

		1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Males	a	0.0042 E = 0.0663	0.0042 E = 0.0824	0.0044 E = 0.1112	0.0020 E = 0.1562	0.0036 E = 0.2538	0.0031 E = 0.0962	0.0033 E = 0.1081	0.0034 E = 0.0886	0.0036 E = 0.1075	0.0042 E = 0.0826	0.0039 E =0.1100	0.0036 E =0.0713	0.0032 Error =0.0963
	b	3.1561 E = 0.0185	3.1622 E = 0.0226	3.1587 E = 0.0308	3.3625 E = 0.0433	3.1925 E = 0.0846	3.2496 E = 0.0285	3.2318 E = 0.0318	3.2123 E = 0.0254	3.2050 E = 0.0306	3.1556 E = 0.0238	3.1847 E = 0.0315	3.2001 E =0.0205	3.2220 Error =0.0270
		R^2 = 0.999 N = 893	R^2 = 0.999 N = 417	R^2 = 0.995 N = 267	R^2 = 0.996 N = 315	R^2 = 0.997 N = 15	R^2 = 0.987 N = 316	R^2 = 0.995 N = 509	R2 = 0.997 N = 498	R2 = 0.995 N = 387	R2 = 0.999 N = 402	R2 = 0.996 N= 411	R2 = 0.999 N= 485	R2 = 0.999 N= 273
Females	a	0.0033 E = 0.0650	0.0038 E = 0.0692	0.0033 E = 0.0897	0.0018 E = 0.1003	0.0034 E = 0.2252	0.0027 E = 0.1315	0.0034 E = 0.0871	0.0026 E = 0.0767	0.0050 E = 0.1357	0.0033 E = 0.1215	0.0041 E =0.0611	0.0032 E =0.0777	0.0039 Error =0.1422
	b	3.2308 E = 0.0170	3.2043 E = 0.0179	3.2547 E = 0.0237	3.4066 E = 0.0262	3.2240 E = 0.0656	3.2950 E = 0.0368	3.2302 E = 0.0241	3.2998 E = 0.0212	3.1259 E = 0.0374	3.2306 E = 0.0342	3.1750 E = 0.0170	3.2457 E =0.0215	3.1931 Error =0.0384
		R^2 = 0.999 N = 1473	R^2 = 0.999 N = 681	R^2 = 0.996 N = 408	R^2 = 0.995 N = 642	R^2 = 0.995 N = 26	R^2 = 0.993 N = 456	R^2 = 0.997 N = 726	R2 = 0.998 N = 600	R2 = 0.991 N = 602	R2 = 0.997 N = 539	R2 = 0.998 N= 680	R2 = 0.999 N= 719	R2 = 0.989 N= 382
Indet.	a	0.0032 E = 0.0547	0.0036 E = 0.0706	0.0040 E = 0.1010	0.0019 E = 0.0893	0.0038 E = 0.1320	0.0028 E = 0.0941	0.0027 E = 0.0814	0.0027 E = 0.0781	0.0040 E = 0.0941	0.0036 E = 0.0715	0.0042 E = 0.0622	0.0030 E =0.0702	0.0037 Error =0.1398
	b	3.2409 E = 0.0145	3.2201 E = 0.0183	3.2009 E = 0.0269	3.3882 E = 0.0234	3.1925 E = 0.0394	3.2837 E = 0.0263	3.2894 E = 0.0226	3.2812 E = 0.0217	3.1787 E = 0.0260	3.2024 E = 0.0201	3.1663 E = 0.0174	3.2546 E = 0.0195	3.2040 Error = 0.0379
		R^2 = 0.999 N = 2383	R^2 = 0.999 N = 1105	R^2 = 0.987 N = 679	R^2 = 0.998 N = 966	R^2 = 0.997 N = 44	R^2 = 0.996 N = 776	R^2 = 0.997 N = 1243	R2 = 0.997 N = 1105	R2 = 0.996 N = 990	R2 = 0.999 N = 941	R2 = 0.998 N= 1095	R2 =0.999 N= 1206	R2 =0.988 N= 662

TABLE 6.- Greenland halibut length distribution per haul mean catches by sex and year. Number per stratified mean catches. Spanish Spring Survey on NAFO 3NO: 1997-2009. Indet. means indeterminate. 1997-2000 data are transformed C/V *Playa de Menduíña* data. 2002-2009 data are original R/V *Vizconde de Eza* data. In 2001, there are data form the two vessels. (*) indicates untransformed data.

	1997				1998				1999				2000				2001			
Lenght (cm.)	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total
6	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.151	0.151	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
8	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
10	0.000	0.043	0.382	0.425	0.000	0.000	0.036	0.036	0.098	0.395	0.000	0.493	0.175	0.169	0.108	0.453	0.404	0.313	0.311	1.028
12	0.477	1.164	0.811	2.452	0.000	0.028	0.086	0.114	0.305	1.049	0.080	1.434	0.525	0.690	0.159	1.374	1.318	1.937	0.566	3.820
14	0.157	0.418	0.234	0.809	0.016	0.283	0.092	0.391	0.244	0.928	0.015	1.187	0.297	0.553	0.019	0.868	1.555	2.089	0.159	3.804
16	0.076	0.081	0.000	0.158	0.038	0.027	0.000	0.065	0.187	0.132	0.000	0.319	0.122	0.162	0.000	0.284	0.280	0.349	0.000	0.629
18	0.934	1.073	0.004	2.012	0.090	0.105	0.000	0.195	0.141	0.322	0.006	0.469	0.146	0.130	0.000	0.276	0.134	0.115	0.000	0.250
20	1.836	2.362	0.012	4.210	0.507	0.540	0.025	1.071	0.867	1.170	0.000	2.037	0.035	0.039	0.000	0.074	0.763	0.900	0.000	1.663
22	1.222	1.395	0.000	2.616	0.699	1.099	0.000	1.798	0.731	1.506	0.000	2.237	0.089	0.083	0.000	0.172	1.431	1.614	0.000	3.045
24	0.507	0.520	0.000	1.027	0.750	0.930	0.000	1.681	0.318	0.591	0.000	0.909	0.152	0.198	0.000	0.350	0.521	0.798	0.000	1.319
26	0.769	0.973	0.000	1.742	1.280	1.447	0.000	2.726	0.625	0.531	0.000	1.156	0.085	0.131	0.000	0.216	0.104	0.136	0.000	0.241
28	1.103	1.091	0.000	2.194	1.893	2.566	0.000	4.459	1.053	0.907	0.000	1.960	0.077	0.104	0.000	0.181	0.033	0.040	0.000	0.073
30	0.676	1.098	0.000	1.774	1.951	2.433	0.000	4.384	1.594	1.649	0.000	3.243	0.150	0.186	0.000	0.335	0.054	0.088	0.000	0.142
32	0.491	0.675	0.000	1.165	1.382	1.885	0.000	3.267	2.232	2.431	0.000	4.662	0.234	0.294	0.000	0.527	0.160	0.189	0.000	0.349
34	0.485	0.723	0.000	1.209	1.543	1.672	0.000	3.214	2.309	2.727	0.000	5.036	0.399	0.464	0.000	0.863	0.169	0.259	0.000	0.428
36	0.412	0.822	0.000	1.234	1.252	1.820	0.000	3.073	1.687	2.289	0.000	3.976	0.677	0.811	0.000	1.488	0.291	0.348	0.000	0.639
38	0.358	0.782	0.000	1.140	1.015	1.509	0.000	2.523	0.815	1.570	0.000	2.385	0.755	1.075	0.000	1.831	0.352	0.528	0.000	0.880
40	0.397	0.689	0.000	1.086	0.546	0.964	0.000	1.509	0.612	1.166	0.000	1.778	0.785	1.562	0.000	2.347	0.539	0.834	0.000	1.373
42	0.332	0.528	0.000	0.860	0.384	0.683	0.000	1.067	0.346	0.758	0.000	1.103	0.608	1.381	0.000	1.989	0.515	0.829	0.000	1.343
44	0.249	0.480	0.000	0.729	0.261	0.560	0.000	0.822	0.260	0.483	0.000	0.742	0.400	1.026	0.000	1.426	0.443	1.064	0.000	1.507
46	0.200	0.394	0.000	0.594	0.199	0.412	0.000	0.611	0.141	0.301	0.000	0.443	0.260	0.624	0.000	0.884	0.384	0.865	0.000	1.249
48	0.115	0.334	0.000	0.449	0.170	0.301	0.000	0.471	0.095	0.223	0.000	0.318	0.115	0.409	0.000	0.524	0.186	0.650	0.000	0.836
50	0.098	0.230	0.000	0.327	0.095	0.233	0.000	0.328	0.043	0.149	0.000	0.192	0.092	0.231	0.000	0.323	0.107	0.347	0.000	0.453
52	0.063	0.154	0.000	0.217	0.082	0.117	0.000	0.199	0.043	0.114	0.000	0.157	0.072	0.175	0.000	0.248	0.051	0.188	0.000	0.239
54	0.049	0.102	0.000	0.151	0.031	0.089	0.000	0.121	0.025	0.065	0.000	0.090	0.037	0.145	0.000	0.182	0.046	0.129	0.000	0.175
56	0.032	0.081	0.000	0.114	0.040	0.079	0.000	0.119	0.021	0.060	0.000	0.081	0.034	0.109	0.000	0.144	0.012	0.073	0.000	0.085
58	0.020	0.057	0.000	0.077	0.015	0.055	0.000	0.070	0.011	0.033	0.000	0.044	0.017	0.060	0.000	0.077	0.019	0.061	0.000	0.080
60	0.019	0.048	0.000	0.068	0.016	0.035	0.000	0.051	0.008	0.029	0.000	0.038	0.012	0.065	0.000	0.076	0.011	0.027	0.000	0.038
62	0.004	0.028	0.000	0.032	0.006	0.020	0.000	0.026	0.006	0.027	0.000	0.034	0.005	0.034	0.000	0.039	0.007	0.042	0.000	0.049
64	0.002	0.033	0.000	0.035	0.007	0.023	0.000	0.030	0.002	0.021	0.000	0.022	0.004	0.035	0.000	0.039	0.003	0.024	0.000	0.027
66	0.002	0.025	0.000	0.027	0.003	0.013	0.000	0.016	0.002	0.016	0.000	0.018	0.004	0.022	0.000	0.026	0.003	0.028	0.000	0.030
68	0.000	0.014	0.000	0.014	0.000	0.008	0.000	0.009	0.001	0.013	0.000	0.013	0.001	0.028	0.000	0.029	0.000	0.011	0.000	0.011
70	0.001	0.011	0.000	0.011	0.000	0.009	0.000	0.009	0.001	0.012	0.000	0.012	0.000	0.020	0.000	0.020	0.000	0.011	0.000	0.011
72	0.000	0.014	0.000	0.014	0.000	0.007	0.000	0.007	0.000	0.012	0.000	0.012	0.000	0.014	0.000	0.014	0.000	0.012	0.000	0.012
74	0.000	0.005	0.000	0.005	0.000	0.007	0.000	0.007	0.000	0.008	0.000	0.008	0.000	0.014	0.000	0.014	0.000	0.008	0.000	0.008
76	0.000	0.005	0.000	0.005	0.000	0.006	0.000	0.006	0.000	0.008	0.000	0.008	0.000	0.006	0.000	0.006	0.000	0.014	0.000	0.014
78	0.000	0.005	0.000	0.005	0.000	0.007	0.000	0.007	0.000	0.012	0.000	0.012	0.000	0.021	0.000	0.021	0.000	0.034	0.000	0.034
80	0.000	0.005	0.000	0.005	0.000	0.005	0.000	0.005	0.000	0.005	0.000	0.005	0.000	0.010	0.000	0.010	0.000	0.004	0.000	0.004
82	0.000	0.002	0.000	0.002	0.000	0.004	0.000	0.004	0.000	0.003	0.000	0.003	0.000	0.007	0.000	0.007	0.000	0.006	0.000	0.006
84	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.001	0.000	0.007	0.000	0.007	0.000	0.007	0.000	0.007
86	0.000	0.000	0.000	0.000	0.000	0.002	0.000	0.002	0.000	0.003	0.000	0.003	0.000	0.006	0.000	0.006	0.000	0.002	0.000	0.002
88	0.000	0.002	0.000	0.002	0.000	0.002	0.000	0.002	0.000	0.002	0.000	0.002	0.000	0.001	0.000	0.001	0.000	0.001	0.000	0.001
90	0.000	0.002	0.000	0.002	0.000	0.001	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.002	0.000	0.002	0.000	0.001	0.000	0.001
92	0.000	0.002	0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
94	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.001	0.000	0.001	0.000	0.001	0.000	0.001	0.000	0.001	0.000	0.000	0.000	0.000
96	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.001
98	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
102	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
104	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Total	11.087	16.467	1.445	28.999	14.270	19.987	0.239	34.496	14.821	21.726	0.251	36.799	6.364	11.103	0.286	17.753	9.894	14.977	1.036	25.907
Nº samples (*):				75				84				78				81				44
Nº Ind. (*):	3444	5550	55	9049	4470	7080	14	11564	4012	6533	6	10551	2991	6162	10	9163	445	739	80	1264
Sampled catch:				390				539				524				635				291
Range (*):				10-92				11-94				7-104				11-94				10-78
Total catch:				1259				1885				1898				1437				332
Total hauls (*):				128				124				114				118				123

TABLE 6 (cont.).- Greenland halibut length distribution per haul mean catches by sex and year. Number per stratified mean catches. Spanish Spring Survey on NAFO 3NO: 1997-2009. Indet. means indeterminate. 1997-2000 data are transformed C/V *Playa de Menduíña* data. 2002-2009 data are original R/V *Vizconde de Eza* data. In 2001, there are data from the two vessels. (*) indicates untransformed data.

	2002				2003				2004				2005			
Lenght (cm.)	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total
6	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
8	0.011	0.014	0.019	0.044	0.029	0.013	0.064	0.106	0.000	0.007	0.009	0.016	0.000	0.000	0.000	0.000
10	0.172	0.201	0.050	0.422	0.347	0.437	0.040	0.824	0.139	0.093	0.015	0.248	0.005	0.028	0.000	0.033
12	0.725	0.715	0.036	1.476	0.707	1.004	0.007	1.718	0.799	0.810	0.039	1.648	0.097	0.078	0.012	0.187
14	0.465	0.523	0.007	0.994	0.361	0.622	0.000	0.983	1.793	1.820	0.023	3.636	0.322	0.383	0.000	0.705
16	0.041	0.033	0.000	0.074	0.051	0.049	0.000	0.100	0.928	0.858	0.000	1.785	0.133	0.270	0.000	0.403
18	0.019	0.013	0.000	0.032	0.021	0.025	0.000	0.046	0.081	0.066	0.000	0.147	0.032	0.035	0.000	0.068
20	0.095	0.085	0.000	0.180	0.112	0.098	0.000	0.210	0.056	0.087	0.000	0.142	0.151	0.092	0.000	0.243
22	0.186	0.246	0.000	0.432	0.393	0.513	0.000	0.906	0.193	0.200	0.000	0.394	0.441	0.552	0.000	0.993
24	0.228	0.277	0.000	0.505	0.305	0.506	0.000	0.810	0.293	0.382	0.000	0.675	0.302	0.518	0.000	0.820
26	0.115	0.148	0.000	0.262	0.161	0.225	0.000	0.386	0.197	0.327	0.000	0.524	0.152	0.320	0.000	0.472
28	0.059	0.070	0.000	0.129	0.190	0.132	0.000	0.323	0.154	0.212	0.000	0.366	0.099	0.131	0.000	0.230
30	0.095	0.118	0.000	0.213	0.342	0.238	0.000	0.581	0.307	0.302	0.000	0.609	0.102	0.193	0.000	0.294
32	0.115	0.232	0.000	0.347	0.256	0.467	0.000	0.723	0.337	0.519	0.000	0.856	0.199	0.226	0.000	0.425
34	0.142	0.200	0.000	0.342	0.317	0.422	0.000	0.739	0.282	0.490	0.000	0.772	0.216	0.307	0.000	0.523
36	0.134	0.182	0.000	0.316	0.173	0.382	0.000	0.555	0.241	0.412	0.000	0.654	0.191	0.320	0.000	0.511
38	0.132	0.192	0.000	0.324	0.214	0.494	0.000	0.708	0.163	0.402	0.000	0.566	0.215	0.377	0.000	0.592
40	0.081	0.303	0.000	0.383	0.260	0.469	0.000	0.729	0.126	0.304	0.000	0.430	0.182	0.343	0.000	0.525
42	0.129	0.260	0.000	0.389	0.182	0.350	0.000	0.532	0.114	0.244	0.000	0.358	0.118	0.225	0.000	0.343
44	0.106	0.218	0.000	0.324	0.094	0.320	0.000	0.414	0.072	0.194	0.000	0.266	0.047	0.196	0.000	0.243
46	0.064	0.166	0.000	0.230	0.149	0.266	0.000	0.415	0.132	0.167	0.000	0.300	0.050	0.164	0.000	0.214
48	0.038	0.129	0.000	0.167	0.149	0.172	0.000	0.321	0.079	0.099	0.000	0.178	0.067	0.117	0.000	0.184
50	0.072	0.138	0.000	0.209	0.095	0.227	0.000	0.322	0.098	0.128	0.000	0.226	0.038	0.095	0.000	0.133
52	0.016	0.048	0.000	0.064	0.090	0.187	0.000	0.277	0.045	0.085	0.000	0.130	0.053	0.081	0.000	0.134
54	0.023	0.087	0.000	0.110	0.037	0.089	0.000	0.127	0.047	0.075	0.000	0.121	0.073	0.067	0.000	0.141
56	0.000	0.038	0.000	0.038	0.032	0.116	0.000	0.148	0.012	0.037	0.000	0.049	0.047	0.026	0.000	0.072
58	0.000	0.009	0.000	0.009	0.007	0.087	0.000	0.094	0.019	0.048	0.000	0.067	0.020	0.088	0.000	0.109
60	0.000	0.017	0.000	0.017	0.000	0.035	0.000	0.035	0.014	0.018	0.000	0.032	0.013	0.024	0.000	0.037
62	0.000	0.000	0.000	0.000	0.000	0.038	0.000	0.038	0.009	0.018	0.000	0.027	0.000	0.020	0.000	0.020
64	0.000	0.014	0.000	0.014	0.000	0.027	0.000	0.027	0.008	0.005	0.000	0.012	0.009	0.018	0.000	0.027
66	0.000	0.005	0.000	0.005	0.000	0.000	0.000	0.000	0.000	0.007	0.000	0.007	0.000	0.006	0.000	0.006
68	0.000	0.009	0.000	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.006	0.011	0.000	0.017
70	0.000	0.000	0.000	0.000	0.000	0.022	0.000	0.022	0.000	0.005	0.000	0.005	0.000	0.015	0.000	0.015
72	0.000	0.000	0.000	0.000	0.000	0.023	0.000	0.023	0.000	0.005	0.000	0.005	0.000	0.000	0.000	0.000
74	0.000	0.000	0.000	0.000	0.000	0.017	0.000	0.017	0.000	0.016	0.000	0.016	0.000	0.018	0.000	0.018
76	0.000	0.000	0.000	0.000	0.000	0.008	0.000	0.008	0.000	0.006	0.000	0.006	0.000	0.000	0.000	0.000
78	0.000	0.006	0.000	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.006	0.000	0.006
80	0.000	0.005	0.000	0.005	0.000	0.000	0.000	0.000	0.000	0.006	0.000	0.006	0.000	0.008	0.000	0.008
82	0.000	0.000	0.000	0.000	0.000	0.012	0.000	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
84	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
86	0.000	0.012	0.000	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
88	0.000	0.009	0.000	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
90	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
92	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
94	0.000	0.000	0.000	0.000	0.000	0.010	0.000	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
96	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.006	0.000	0.006	0.000	0.000	0.000	0.000
98	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
102	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
104	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Total	3.262	4.718	0.111	8.092	5.077	8.101	0.111	13.288	6.738	8.459	0.087	15.284	3.381	5.359	0.012	8.752
Nº samples (*):				76				79				79				78
Nº Ind. (*):	535	782	17	1334	878	1317	17	2212	1235	1511	13	2759	579	925	2	1506
Sampled catch:				430				742				624				507
Range (*):				9-89				8-95				9-96				11-81
Total catch:				429				749				624				551
Total hauls (*):				125				118				120				119

TABLE 6 (cont.).- Greenland halibut length distribution per haul mean catches by sex and year. Number per stratified mean catches. Spanish Spring Survey on NAFO 3NO: 1997-2009. Indet. means indeterminate. 1997-2000 data are transformed C/V *Playa de Menduíña* data. 2002-2009 data are original R/V *Vizconde de Eza* data. In 2001, there are data from the two vessels. (*) indicates untransformed data.

	2006				2007				2008				2009			
Lenght (cm.)	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total
6	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
8	0.000	0.000	0.000	0.000	0.000	0.000	0.005	0.005	0.000	0.000	0.009	0.009	0.000	0.000	0.000	0.000
10	0.116	0.030	0.000	0.146	0.050	0.030	0.019	0.099	0.091	0.089	0.018	0.198	0.037	0.053	0.089	0.179
12	0.505	0.523	0.007	1.035	0.259	0.204	0.011	0.474	0.118	0.191	0.021	0.329	0.174	0.102	0.039	0.315
14	0.755	0.674	0.000	1.429	0.329	0.418	0.005	0.752	0.029	0.049	0.004	0.083	0.149	0.087	0.000	0.237
16	0.323	0.259	0.000	0.582	0.218	0.212	0.008	0.438	0.021	0.018	0.000	0.039	0.000	0.014	0.000	0.014
18	0.053	0.060	0.000	0.113	0.017	0.036	0.000	0.053	0.030	0.046	0.000	0.075	0.335	0.314	0.000	0.649
20	0.013	0.007	0.000	0.020	0.030	0.004	0.000	0.034	0.162	0.169	0.000	0.331	0.656	1.228	0.000	1.885
22	0.024	0.019	0.000	0.043	0.071	0.078	0.000	0.149	0.239	0.253	0.000	0.492	0.663	0.589	0.000	1.251
24	0.073	0.106	0.000	0.179	0.166	0.300	0.000	0.466	0.163	0.340	0.000	0.503	0.274	0.331	0.000	0.605
26	0.075	0.081	0.000	0.156	0.141	0.243	0.000	0.384	0.081	0.218	0.000	0.299	0.293	0.296	0.000	0.589
28	0.050	0.144	0.000	0.194	0.044	0.062	0.000	0.106	0.097	0.102	0.000	0.199	0.628	0.437	0.000	1.066
30	0.102	0.159	0.000	0.260	0.042	0.016	0.000	0.058	0.087	0.057	0.000	0.143	0.343	0.511	0.000	0.854
32	0.177	0.167	0.000	0.344	0.059	0.049	0.000	0.107	0.127	0.207	0.000	0.334	0.457	0.492	0.000	0.948
34	0.278	0.203	0.000	0.481	0.161	0.122	0.000	0.282	0.092	0.241	0.000	0.333	0.507	0.294	0.000	0.801
36	0.193	0.284	0.000	0.478	0.133	0.239	0.000	0.373	0.178	0.205	0.000	0.383	0.293	0.241	0.000	0.534
38	0.163	0.294	0.000	0.457	0.174	0.286	0.000	0.460	0.153	0.132	0.000	0.285	0.358	0.274	0.000	0.632
40	0.200	0.332	0.000	0.533	0.221	0.313	0.000	0.534	0.286	0.274	0.000	0.560	0.528	0.722	0.000	1.250
42	0.160	0.397	0.000	0.557	0.179	0.267	0.000	0.446	0.295	0.519	0.000	0.814	0.571	0.906	0.000	1.477
44	0.099	0.303	0.000	0.402	0.117	0.406	0.000	0.524	0.284	0.594	0.000	0.878	0.629	1.109	0.000	1.738
46	0.052	0.120	0.000	0.172	0.145	0.352	0.000	0.498	0.306	0.719	0.000	1.025	0.487	1.484	0.000	1.971
48	0.082	0.147	0.000	0.229	0.102	0.342	0.000	0.445	0.299	0.704	0.000	1.003	0.494	1.409	0.000	1.902
50	0.050	0.149	0.000	0.199	0.107	0.292	0.000	0.399	0.214	0.509	0.000	0.722	0.496	1.308	0.000	1.804
52	0.031	0.102	0.000	0.133	0.069	0.141	0.000	0.209	0.151	0.460	0.000	0.612	0.268	1.023	0.000	1.291
54	0.028	0.054	0.000	0.082	0.014	0.115	0.000	0.129	0.054	0.304	0.000	0.358	0.149	0.466	0.000	0.614
56	0.033	0.050	0.000	0.083	0.017	0.087	0.000	0.104	0.086	0.234	0.000	0.320	0.078	0.376	0.000	0.455
58	0.018	0.037	0.000	0.055	0.012	0.057	0.000	0.069	0.044	0.191	0.000	0.235	0.076	0.202	0.000	0.278
60	0.023	0.019	0.000	0.042	0.018	0.025	0.000	0.043	0.000	0.091	0.000	0.091	0.029	0.120	0.000	0.149
62	0.006	0.010	0.000	0.016	0.000	0.017	0.000	0.017	0.009	0.061	0.000	0.070	0.000	0.052	0.000	0.052
64	0.000	0.019	0.000	0.019	0.000	0.027	0.000	0.027	0.000	0.029	0.000	0.029	0.009	0.052	0.000	0.061
66	0.000	0.000	0.000	0.000	0.000	0.022	0.000	0.022	0.000	0.005	0.000	0.005	0.000	0.042	0.000	0.042
68	0.000	0.000	0.000	0.000	0.000	0.016	0.000	0.016	0.000	0.018	0.000	0.018	0.000	0.012	0.000	0.012
70	0.000	0.000	0.000	0.000	0.000	0.006	0.000	0.006	0.000	0.018	0.000	0.018	0.000	0.007	0.000	0.007
72	0.000	0.005	0.000	0.005	0.000	0.008	0.000	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
74	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.079	0.000	0.079
76	0.000	0.007	0.000	0.007	0.000	0.000	0.000	0.000	0.000	0.007	0.000	0.007	0.000	0.011	0.000	0.011
78	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
80	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
82	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.024	0.000	0.024
84	0.000	0.000	0.000	0.000	0.000	0.010	0.000	0.010	0.000	0.017	0.000	0.017	0.000	0.000	0.000	0.000
86	0.000	0.005	0.000	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
88	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.005	0.000	0.005	0.000	0.000	0.000	0.000
90	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
92	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
94	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
96	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
98	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
102	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
104	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Total	3.683	4.765	0.007	8.455	2.895	4.803	0.048	7.746	3.698	7.075	0.051	10.825	8.980	14.667	0.128	23.775
Nº samples (*):				71				68				83				57
Nº Ind. (*):	611	773	1	1385	473	805	7	1285	656	1219	10	1885	702	1296	11	2009
Sampled catch:				460				623				1215				1424
Range (*):				10-87				9-84				9-88				10-83
Total catch:				467				623				1215				1918
Total hauls (*):				120				110				122				109

TABLE 7.-Greenland halibut age numbers per haul mean catches by sex and year. Number per stratified mean catches. Spanish Spring Survey on NAFO 3NO: 1997-2009. Indet. means indeterminate. 1997-2000 data are transformed C/V *Playa de Menduíña* data. 2002-2009 data are original R/V *Vizconde de Eza* data. In 2001, there are data form the two vessels.

	1997				1998				1999				2000				2001			
Age	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total
0											0.15	0.15								
1	3.74	4.74	1.44	9.92	0.57	0.92	0.22	1.71	1.14	3.15	0.10	4.38	1.15	1.49	0.29	2.92	3.40	4.44	1.03	8.87
2	2.70	2.82	0.00	5.52	2.61	2.62	0.01	5.24	1.86	2.94	0.00	4.80	0.22	0.27		0.49	2.59	3.30	0.01	5.90
3	1.67	1.82		3.49	4.24	4.84		9.08	4.09	3.12		7.21	0.34	0.47		0.80	0.51	0.67		1.18
4	0.81	2.99		3.81	3.35	5.12		8.47	4.35	4.96		9.31	0.59	0.80		1.39	0.41	0.66		1.07
5	0.98	1.26		2.24	1.92	3.14		5.06	2.06	4.23		6.29	1.50	2.34		3.84	1.20	1.64		2.84
6	0.77	1.20		1.97	0.97	1.80		2.77	0.81	2.12		2.92	1.48	2.95		4.42	1.23	2.73		3.96
7	0.21	1.01		1.22	0.34	0.76		1.10	0.32	0.45		0.77	0.89	1.67		2.56	0.50	1.06		1.56
8	0.19	0.41		0.60	0.20	0.46		0.66	0.13	0.36		0.49	0.12	0.59		0.71	0.02	0.20		0.22
9	0.01	0.06		0.07	0.04	0.17		0.21	0.04	0.19		0.23	0.06	0.23		0.28	0.01	0.05		0.06
10	0.00	0.05		0.05	0.03	0.06		0.08	0.03	0.06		0.09	0.02	0.06		0.08	0.01	0.04		0.05
11	0.00	0.05		0.05	0.01	0.03		0.03	0.01	0.02		0.03	0.01	0.05		0.06	0.01	0.03		0.04
12	0.00	0.01		0.02	0.00	0.03		0.03	0.00	0.04		0.05	0.00	0.03		0.04	0.00	0.05		0.05
13		0.01		0.01		0.02		0.02		0.03		0.03	0.00	0.04		0.05	0.00	0.04		0.05
14		0.02		0.02		0.01		0.01		0.03		0.03	0.00	0.05		0.06	0.00	0.04		0.04
15		0.01		0.01		0.01		0.01		0.02		0.02		0.03		0.03		0.02		0.02
16		0.00		0.00		0.00		0.00		0.01		0.01		0.02		0.02		0.00		0.00
17		0.00		0.00		0.00		0.00		0.00		0.00		0.01		0.01		0.00		0.00
18		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00				
19										0.00				0.00		0.00		0.00		0.00
20		0.00		0.00						0.00										
Total	11.09	16.47	1.44	29.00	14.27	19.99	0.24	34.50	14.82	21.73	0.25	36.80	6.36	11.10	0.29	17.75	9.89	14.98	1.04	25.91

	2002				2003				2004				2005			
Age	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total
0																
1	1.40	1.40	0.11	2.91	1.39	2.07	0.11	3.56	0.45	0.71	0.05	1.22	0.42	0.64	0.01	1.07
2	0.33	0.32	0.00	0.64	1.05	1.35	0.00	2.40	3.55	3.37	0.04	6.96	0.56	0.40	0.00	0.97
3	0.38	0.65		1.02	0.82	0.86		1.68	0.74	1.34		2.09	0.63	1.18		1.81
4	0.24	0.46		0.69	0.86	1.05		1.91	1.01	1.04		2.06	0.44	0.60		1.04
5	0.47	0.67		1.14	0.35	1.22		1.58	0.33	0.91		1.24	0.49	0.83		1.32
6	0.32	0.60		0.92	0.29	0.61		0.90	0.39	0.46		0.85	0.40	1.04		1.44
7	0.11	0.33		0.44	0.28	0.50		0.78	0.15	0.37		0.51	0.30	0.39		0.68
8	0.01	0.21		0.23	0.04	0.23		0.26	0.09	0.12		0.21	0.08	0.11		0.19
9		0.02		0.02	0.00	0.06		0.06	0.01	0.04		0.05	0.02	0.06		0.08
10		0.01		0.01		0.04		0.04	0.02	0.01		0.03	0.02	0.04		0.06
11		0.02		0.02		0.01		0.01	0.01	0.00		0.01	0.00	0.02		0.03
12		0.02		0.02		0.07		0.07		0.03		0.03	0.01	0.01		0.02
13		0.01		0.01		0.01		0.01		0.02		0.02		0.03		0.03
14		0.01		0.01		0.01		0.01		0.01		0.01		0.02		0.02
15		0.02		0.02						0.01		0.01		0.00		0.00
16														0.00		0.00
17						0.01		0.01								
18														0.00		0.00
19																
20																
Total	3.26	4.72	0.11	8.09	5.08	8.10	0.11	13.29	6.74	8.46	0.09	15.28	3.38	5.36	0.01	8.75

TABLE 7 (Cont.).-Greenland halibut age numbers per haul mean catches by sex and year. Number per stratified mean catches. Spanish Spring Survey on NAFO 3NO: 1997-2009. Indet. means indeterminate. 1997-2000 data are transformed C/V *Playa de Menduíña* data. 2002-2009 data are original R/V *Vizconde de Eza* data. In 2001, there are data from the two vessels.

	2006				2007				2008				2009			
Age	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total
0																
1	1.24	1.06	0.01	2.31	0.87	0.89	0.05	1.81	0.23	0.34	0.05	0.62	0.36	0.21	0.13	0.70
2	0.58	0.53		1.12	0.26	0.39		0.64	0.52	0.47		0.99	1.53	1.69		3.22
3	0.14	0.27		0.41	0.19	0.32		0.51	0.28	0.62		0.90	0.97	1.25		2.21
4	0.68	0.87		1.55	0.18	0.14		0.32	0.25	0.44		0.69	1.17	1.45		2.61
5	0.37	1.01		1.38	0.50	0.99		1.48	0.41	0.52		0.93	1.62	1.11		2.73
6	0.37	0.45		0.81	0.50	0.90		1.40	0.86	1.84		2.70	1.73	3.21		4.94
7	0.20	0.32		0.52	0.28	0.74		1.02	0.90	1.61		2.50	1.32	4.35		5.67
8	0.06	0.16		0.22	0.08	0.20		0.29	0.14	0.60		0.74	0.12	0.73		0.85
9	0.02	0.03		0.05		0.10		0.10	0.09	0.31		0.40	0.06	0.30		0.35
10	0.02	0.01		0.03	0.02	0.07		0.09	0.01	0.15		0.15	0.08	0.11		0.19
11		0.02		0.02		0.03		0.03	0.01	0.09		0.10	0.04	0.10		0.14
12		0.02		0.02		0.03		0.03		0.03		0.03		0.03		0.03
13		0.00		0.00						0.02		0.02		0.02		0.02
14		0.01		0.01		0.01		0.01		0.01		0.01		0.01		0.01
15										0.02		0.02		0.08		0.08
16		0.00		0.00		0.01		0.01		0.01		0.01		0.02		0.02
17																
18																
19																
20																
Total	3.68	4.76	0.01	8.45	2.90	4.80	0.05	7.75	3.70	7.07	0.05	10.82	8.98	14.67	0.13	23.78

TABLE 8.-Greenland halibut mean length (cm) per haul mean catches by sex and year. Number per stratified mean catches. Spanish Spring Survey on NAFO 3NO: 1997-2009. Indet. means indeterminate. 1997-2000 data are transformed C/V *Playa de Menduíña* data. 2002-2009 data are original R/V *Vizconde de Eza* data. In 2001, there are data from the two vessels.

	1997				1998				1999				2000				2001			
Age	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total
0											7.50	7.50								
1	19.81	18.18	12.74	18.01	21.13	19.32	14.09	19.24	16.18	15.28	12.90	15.46	13.81	13.69	12.61	13.63	13.85	13.94	12.78	13.77
2	25.07	23.39	20.19	24.21	25.80	24.54	21.50	25.16	23.11	22.79	18.50	22.91	21.01	19.39		20.12	22.07	22.05	14.84	22.05
3	30.53	29.26		29.87	30.57	29.55		30.03	31.66	30.02		30.95	26.56	27.06		26.85	24.68	26.41		25.66
4	35.84	33.84		34.27	34.21	33.49		33.78	34.05	34.09		34.07	33.79	32.46		33.02	33.45	35.67		34.83
5	39.56	39.25		39.38	37.70	38.41		38.14	37.18	38.20		37.87	38.28	38.60		38.47	39.96	41.07		40.60
6	43.76	44.13		43.99	42.32	42.05		42.14	42.30	40.91		41.30	41.55	42.53		42.21	44.62	45.07		44.93
7	50.97	47.85		48.38	48.42	47.13		47.53	46.47	46.35		46.40	44.89	45.91		45.56	48.26	49.83		49.33
8	50.30	52.28		51.66	50.85	50.89		50.88	51.48	50.42		50.69	53.78	50.51		51.05	56.67	55.58		55.66
9	59.75	59.71		59.72	55.22	53.98		54.22	54.20	53.41		53.54	54.71	55.22		55.12	59.08	59.18		59.16
10	62.50	65.54		65.39	55.28	60.01		58.54	52.29	58.76		56.86	59.85	60.83		60.63	60.33	62.15		61.71
11	65.19	64.52		64.53	62.73	63.40		63.25	62.78	63.55		63.35	62.57	62.58		62.58	62.31	64.62		64.21
12	66.19	71.70		70.74	64.83	68.11		67.86	65.90	66.89		66.83	62.94	65.05		64.77	63.71	67.60		67.33
13		75.84		75.84		73.38		73.38		72.91		72.91	63.53	68.44		68.21	66.28	73.91		73.25
14		77.14		77.14		74.81		74.81		74.49		74.49	67.06	72.48		72.06	78.50	76.47		76.49
15		75.41		75.41		77.99		77.99		76.64		76.64		78.52		78.52		80.53		80.53
16		86.66		86.66		81.44		81.44		83.60		83.60		78.94		78.94		86.14		86.14
17		91.50		91.50		87.76		87.76		90.06		90.06		83.62		83.62		89.08		89.08
18		83.35		83.35		90.48		90.48		94.50		94.50		85.17		85.17				
19														91.03		91.03		97.50		97.50
20		92.50		92.05																
Total	28.46	29.93	12.76	28.52	32.78	33.62	14.54	33.14	32.05	31.74	9.76	31.72	34.47	37.83	12.61	36.22	26.34	29.99	12.80	27.91

TABLE 8 (Cont.).-Greenland halibut mean length (cm) per haul mean catches by sex and year. Number per stratified mean catches. Spanish Spring Survey on NAFO 3NO: 1997-2009. Indet. means indeterminate. 1997-2000 data are transformed C/V *Playa de Menduíña* data. 2002-2009 data are original R/V *Vizconde de Eza* data. In 2001, there are data from the two vessels. (*) indicates untransformed data.

	2002				2003				2004				2005			
Age	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total
0																
1	13.51	13.40	11.53	13.39	12.96	13.17	10.15	12.99	12.14	12.94	11.54	12.58	14.77	15.08	12.50	14.93
2	22.93	20.64	14.50	21.80	23.06	23.83	12.50	23.49	16.47	16.75	14.07	16.59	20.68	21.61	12.50	21.06
3	25.34	25.56		25.48	31.31	31.43		31.37	25.29	29.09		27.74	24.98	24.59		24.73
4	33.61	33.31		33.41	36.64	36.62		36.63	33.61	34.70		34.17	31.66	30.75		31.13
5	37.57	39.21		38.53	42.37	41.22		41.48	39.85	39.40		39.52	36.91	37.57		37.32
6	44.31	43.42		43.73	47.12	46.49		46.70	45.12	44.79		44.94	41.07	41.85		41.63
7	50.04	48.67		49.03	51.58	52.40		52.11	52.07	50.62		51.04	48.58	48.96		48.80
8	55.13	53.43		53.53	56.19	56.47		56.43	54.02	55.95		55.16	55.20	56.59		55.98
9		57.13		57.13	58.50	60.69		60.57	59.66	58.82		59.04	57.66	58.45		58.25
10		61.02		61.02		63.25		63.25	61.61	61.10		61.41	62.45	60.69		61.24
11		63.39		63.39		64.50		64.50	64.50	64.50		64.50	61.50	64.47		64.10
12		71.71		71.71		72.19		72.19		63.61		63.61	68.48	69.92		69.45
13		78.50		78.50		77.50		77.50		73.79		73.79		71.44		71.44
14		87.50		87.50		82.50		82.50		75.50		75.50		77.40		77.40
15		88.68		88.68						88.20		88.20		76.68		76.68
16														76.04		76.04
17						95.50		95.50								
18														79.50		79.50
19																
20																
Total	25.23	30.33	11.55	28.02	28.49	31.73	10.16	30.31	24.00	27.33	12.63	25.78	30.85	33.07	12.50	32.18

	2006				2007				2008				2009			
Age	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total
0																
1	13.77	14.07	13.50	13.91	14.75	14.96	12.92	14.80	12.33	12.77	12.05	12.54	13.49	12.98	11.82	13.03
2	17.68	17.03		17.37	24.42	25.10		24.83	22.25	22.06		22.16	21.47	21.23		21.34
3	26.28	27.23		26.91	26.81	26.69		26.74	26.80	25.73		26.06	26.24	24.56		25.29
4	34.31	35.11		34.76	33.54	34.10		33.79	32.52	33.04		32.85	31.73	32.01		31.89
5	39.43	41.20		40.72	38.38	39.95		39.42	38.30	38.15		38.22	38.53	38.96		38.70
6	43.24	44.80		44.10	43.78	45.29		44.75	43.30	44.90		44.39	44.86	44.70		44.76
7	49.53	50.18		49.93	49.28	49.84		49.68	48.92	49.72		49.43	49.80	50.20		50.10
8	54.46	54.90		54.78	54.65	54.19		54.32	54.54	54.08		54.17	53.30	55.15		54.90
9	59.57	58.01		58.62		57.46		57.46	56.81	56.19		56.34	57.12	58.17		58.00
10	61.82	61.50		61.73	61.05	61.36		61.28	57.50	59.84		59.72	58.50	61.05		60.03
11		62.10		62.10		65.60		65.60	63.50	62.90		62.96	62.43	63.66		63.32
12		64.50		64.50		68.74		68.74		63.25		63.25		67.16		67.16
13		72.50		72.50						69.00		69.00		66.86		66.86
14		77.50		77.50		72.50		72.50		71.50		71.50		72.77		72.77
15										80.94		80.94		75.57		75.57
16		87.50		87.50		84.50		84.50		85.92		85.92		83.50		83.50
17																
18																
19																
20																
Total	27.30	32.39	13.50	30.16	31.59	37.34	12.92	35.04	38.07	42.21	12.05	40.65	35.89	41.16	11.82	39.01

TABLE 9.-Greenland halibut mean weight (gr) per haul mean catches by sex and year. Number per stratified mean catches. Spanish Spring Survey on NAFO 3NO: 1997-2009. Indet. means indeterminate. 1997-2000 data are transformed C/V *Playa de Menduíña* data. 2002-2009 data are original R/V *Vizconde de Eza* data. In 2001, there are data from the two vessels. (*) indicates untransformed data.

	1997				1998				1999				2000				2001			
Age	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total
0											2.53	2.53								
1	56.55	44.11	12.86	44.25	66.73	56.01	19.75	54.81	33.43	28.91	14.71	29.77	14.69	13.93	10.45	13.89	16.47	17.18	13.45	16.48
2	116.19	90.71	54.44	103.16	126.63	111.44	70.48	118.89	93.56	89.74	45.51	91.18	59.74	47.35		52.97	72.15	75.92	20.95	74.19
3	210.65	184.05		196.79	216.07	199.69		207.33	248.40	218.64		235.53	128.63	150.58		141.39	102.12	138.28		122.55
4	343.22	296.07		306.12	307.90	300.76		303.58	313.10	327.53		320.789	282.32	262.15		270.66	271.96	351.48		321.30
5	477.91	474.14		475.79	416.64	461.62		444.53	409.22	473.15		452.20	427.90	463.68		449.67	474.57	549.96		518.19
6	655.66	691.54		677.57	598.59	618.72		611.69	609.82	591.51		596.56	569.60	645.43		620.11	676.20	739.46		719.83
7	1039.74	904.80		927.81	910.39	891.49		897.31	822.33	886.29		859.87	730.54	839.28		801.57	869.70	1020.42		971.90
8	1026.08	1215.64		1156.61	1069.28	1143.26		1120.75	1140.19	1164.85		1158.54	1328.46	1174.58		1199.73	1427.84	1443.38		1442.29
9	1712.22	1824.90		1803.51	1386.01	1376.62		1378.47	1348.28	1405.65		1395.92	1413.25	1563.75		1533.36	1628.57	1759.76		1735.49
10	1955.36	2451.90		2427.15	1432.74	1924.36		1771.37	1232.46	1904.19		1707.55	1905.57	2159.81		2106.74	1741.34	2059.38		1981.96
11	2237.75	2337.64		2335.75	2039.82	2276.20		2223.67	2111.90	2448.25		2362.51	2208.37	2378.52		2363.60	1929.96	2341.88		2269.44
12	2352.23	3300.22		3135.63	2253.06	2917.28		2867.21	2463.10	2940.32		2912.86	2245.01	2715.93		2653.68	2073.82	2719.39		2673.75
13		3942.66		3942.66		3684.55		3684.55		3877.33		3877.33	2312.31	3242.15		3199.58	2352.00	3656.76		3543.88
14		4190.79		4190.79		3909.22		3909.22		4188.33		4188.33	2772.46	3964.91		3872.13	4033.42	4068.04		4067.64
15		3887.49		3887.49		4480.36		4480.36		4594.01		4594.01		5205.90		5205.90		4770.13		4770.13
16		6092.92		6092.92		5136.80		5136.80		6339.81		6339.81		5334.32		5334.32		5906.19		5906.19
17		7169.24		7169.24		6438.79		6438.79		7771.36		7771.36		6423.59		6423.59		6596.90		6596.90
18		5376.62		5376.62		7159.28		7159.28		8870.58		8870.58		6830.30		6830.30				
19														8552.11		8552.11		8790.83		8790.83
20		7425.48		7425.48																
Total	232.20	308.61	12.96	264.67	303.57	365.55	22.83	337.54	299.38	352.89	7.97	328.98	420.62	613.57	10.45	534.70	235.78	384.60	13.51	312.93

	2002				2003				2004				2005			
Age	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total
0																
1	15.16	14.44	9.15	14.58	13.64	14.67	5.75	13.99	10.36	12.15	8.85	11.35	20.40	24.66	12.40	22.85
2	85.12	64.56	18.23	74.96	91.26	98.95	11.06	95.57	32.38	33.31	16.10	32.74	61.94	81.27	12.40	69.97
3	115.32	119.77		118.13	233.58	239.55		236.64	127.49	187.69		166.28	109.33	113.89		112.30
4	292.89	280.11		284.52	384.32	389.32		387.08	276.74	315.37		296.34	235.20	229.40		231.85
5	420.87	483.24		457.46	603.57	567.97		575.95	474.56	478.78		477.67	384.54	423.10		408.67
6	705.62	677.06		686.90	848.07	832.07		837.28	707.95	723.66		716.51	540.86	602.50		585.18
7	1043.65	978.53		995.47	1139.15	1223.51		1193.47	1111.11	1087.07		1094.00	940.73	972.27		958.57
8	1413.34	1331.03		1336.18	1491.39	1556.30		1546.84	1261.22	1510.72		1408.99	1371.22	1504.91		1446.10
9		1645.43		1645.43	1696.71	1957.74		1942.74	1714.45	1774.27		1759.06	1567.35	1668.79		1643.60
10		2045.34		2045.34		2235.61		2235.61	1901.04	2010.19		1944.89	2030.67	1869.10		1919.39
11		2325.25		2325.25		2380.78		2380.78	2200.49	2398.03		2258.79	1926.64	2255.28		2214.16
12		3573.05		3573.05		3442.28		3442.28		2297.05		2297.05	2733.13	2920.33		2858.54
13		4688.33		4688.33		4308.25		4308.25		3746.17		3746.17		3122.04		3122.04
14		6704.09		6704.09		5272.40		5272.40		4034.69		4034.69		4024.01		4024.01
15		7010.77		7010.77						6945.38		6945.38		3923.74		3923.74
16														3829.26		3829.26
17						8458.35		8458.35								
18														4337.35		4337.35
19																
20																
Total	222.00	406.07	9.20	326.40	290.81	443.31	5.78	381.40	187.38	285.66	11.97	240.78	328.36	425.37	12.40	387.33

TABLE 9 (Cont.).-Greenland halibut mean weight (gr) per haul mean catches by sex and year. Number per stratified mean catches. Spanish Spring Survey on NAFO 3NO: 1997-2009. Indet. means indeterminate. 1997-2000 data are transformed C/V *Playa de Menduíña* data. 2002-2009 data are original R/V *Vizconde de Eza* data. In 2001, there are data from the two vessels.

	2006				2007				2008				2009			
Age	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total
0																
1	16.77	17.32	15.20	17.02	21.41	22.91	15.24	21.99	11.68	13.02	10.61	12.32	14.41	13.49	9.59	13.25
2	39.71	35.77		37.83	104.32	115.53		111.03	77.06	74.84		76.00	64.28	65.95		65.16
3	128.14	147.05		140.62	138.93	140.89		140.14	139.51	122.38		127.67	122.58	108.77		114.79
4	296.98	335.57		318.55	283.54	303.54		292.31	255.60	274.67		267.76	224.73	249.65		238.52
5	463.22	558.91		533.21	437.41	507.44		484.01	433.41	439.94		437.05	429.07	476.92		448.51
6	614.40	718.56		671.84	666.30	752.32		721.42	639.14	743.15		709.89	688.92	731.20		716.36
7	955.05	1039.83		1007.25	962.80	1017.87		1002.51	941.57	1034.12		1000.93	961.06	1063.47		1039.59
8	1261.22	1386.76		1351.91	1337.24	1325.29		1328.75	1328.94	1352.57		1348.21	1191.16	1440.76		1406.66
9	1666.78	1648.82		1655.80		1590.23		1590.23	1506.93	1529.10		1524.03	1473.86	1705.16		1666.99
10	1871.62	1984.49		1901.68	1894.70	1958.27		1941.94	1561.24	1868.77		1853.03	1590.33	1993.62		1832.51
11		2048.31		2048.31		2416.31		2416.31	2144.93	2197.84		2192.93	1966.45	2283.68		2196.79
12		2314.58		2314.58		2801.55		2801.55		2236.83		2236.83		2712.89		2712.89
13		3376.88		3376.88						2962.25		2962.25		2674.14		2674.14
14		4188.75		4188.75		3315.34		3315.34		3322.76		3322.76		3523.82		3523.82
15										5013.75		5013.75		3976.49		3976.49
16		6199.50		6199.50		5391.71		5391.71		6042.88		6042.88		5497.86		5497.86
17																
18																
19																
20																
Total	270.93	426.46	15.20	358.38	381.58	598.44	15.24	513.79	560.48	789.72	10.61	707.71	452.37	734.08	9.59	623.77

TABLE 10.- Swept area, number of hauls and American plaice mean catch (kg) and SD by stratum. Spanish Spring Surveys on NAFO Div. 3NO: 1997-2009. Swept area in square miles. n.s. means stratum not surveyed. 1997-2000 data are transformed C/V *Playa de Menduíña* data, and 2002-2009 data are original from R/V *Vizconde de Eza*. In 2001, there are data from the two vessels.

	1997				1998				1999				2000				2001			
Stratum	Swept area	Tow number	A. Plaice Mean	A. Plaice SD	Swept area	Tow number	A. Plaice Mean	A. Plaice SD	Swept area	Tow number	A. Plaice Mean	A. Plaice SD	Swept area	Tow number	A. Plaice Mean	A. Plaice SD	Swept area	Tow number	A. Plaice Mean	A. Plaice SD
353	0.0480	4	47.97	25.084	0.0465	4	267.95	103.830	0.0360	3	388.97	37.624	0.0356	3	426.02	210.639	0.0341	3	451.08	185.936
354	0.0233	2	34.16	18.447	0.0356	3	381.49	146.407	0.0218	2	184.12	100.017	0.0356	3	147.44	84.780	0.0338	3	172.21	144.326
355	0.0233	2	14.02	4.617	0.0221	2	134.67	132.931	0.0229	2	60.82	30.122	0.0233	2	60.01	1.539	0.0240	2	206.75	85.065
356	0.0225	2	8.15	4.133	0.0221	2	14.23	5.343	0.0229	2	31.47	23.877	0.0225	2	28.11	24.368	0.0240	2	83.56	40.362
357	0.0443	4	1.86	1.051	0.0240	2	2.33	0.484	0.0236	2	3.06	1.913	0.0124	1	0.55	-	0.0244	2	76.85	105.720
358	0.0563	5	4.44	4.415	0.0236	3	6.73	1.265	0.0349	3	9.06	15.047	0.0341	3	298.64	437.609	0.0345	3	35.80	28.161
359	0.0690	6	30.12	15.773	0.0698	6	198.60	199.740	0.0364	3	484.88	84.636	0.0469	4	659.75	139.208	0.0803	7	347.89	328.624
360	0.3754	32	26.15	17.839	0.2561	25	107.53	64.858	0.2325	19	263.77	91.624	0.2396	20	324.76	269.238	0.2423	20	261.79	173.177
374	0.0353	3	8.40	3.170	0.0353	3	4.00	0.906	0.0244	2	44.00	1.495	0.0240	2	5.60	0.440	0.0240	2	14.95	1.909
375	0.0116	1	1.85	-	0.0345	3	5.93	3.550	0.0236	2	42.21	15.545	0.0244	2	30.11	9.300	0.0338	3	4.77	1.680
376	0.1583	14	12.53	8.741	0.0930	10	82.92	73.283	0.1219	10	119.90	62.748	0.1200	10	250.98	179.289	0.1155	10	46.95	32.487
377	0.0116	1	20.96	-	0.0229	2	47.18	59.694	0.0240	2	86.16	117.320	0.0229	2	27.02	29.064	0.0229	2	21.09	10.204
378	0.0210	2	1.87	1.583	0.0120	2	5.22	2.199	0.0229	2	7.14	4.199	0.0233	2	19.74	22.646	0.0236	2	2.75	1.287
379	0.0206	2	1.78	1.568	0.0356	3	2.65	1.804	0.0236	2	0.78	0.308	0.0225	2	2.30	1.146	0.0229	2	0.84	0.092
380	0.0210	2	1.41	0.079	0.0113	2	1.69	0.945	0.0236	2	2.22	0.066	0.0236	2	1.74	0.402	0.0206	2	2.97	0.638
381	0.0221	2	1.55	0.895	0.0229	2	8.41	10.927	0.0229	2	0.59	0.231	0.0236	2	2.03	1.269	0.0236	2	2.35	0.154
382	0.0461	4	0.59	0.340	0.0229	3	4.35	3.017	0.0484	4	2.25	0.610	0.0499	4	1.92	0.562	0.0469	4	3.02	0.929
721	0.0221	2	13.40	12.225	0.0203	2	7.68	6.464	0.0244	2	20.06	10.378	0.0236	2	4.21	4.725	0.0248	2	115.20	86.974
722	0.0214	2	46.66	65.850	0.0101	2	1.99	2.375	0.0229	2	2.43	0.704	0.0218	2	1.21	1.715	0.0233	2	30.29	35.511
723	0.0210	2	8.79	5.464	0.0233	2	10.04	8.619	0.0229	2	34.05	29.946	0.0248	2	10.67	7.344	0.0240	2	36.15	39.244
724	0.0225	2	13.33	17.024	0.0206	2	10.84	2.528	0.0225	2	9.89	10.466	0.0233	2	12.31	1.803	0.0353	3	26.47	26.158
725	0.0206	2	1.31	0.882	0.0086	1	0.62	-	0.0229	2	2.48	0.073	0.0210	2	8.64	8.707	0.0116	2	3.37	0.368
726	n.s.	n.s.	n.s.	n.s.	0.0094	2	2.95	2.726	0.0225	2	39.96	47.051	0.0221	2	8.24	4.177	0.0116	2	1.80	0.430
727	0.0094	1	9.37	-	0.0233	2	9.02	3.782	0.0236	2	7.56	7.651	0.0210	2	4.59	2.089	0.0225	2	8.46	5.277
728	0.0214	2	32.09	23.965	0.0206	2	15.58	4.617	0.0233	2	37.93	22.294	0.0210	2	22.82	0.178	0.0229	2	5.85	1.143
752	0.0218	2	112.70	128.072	0.0229	2	49.95	7.102	0.0233	2	35.68	10.927	0.0206	2	128.14	25.680	0.0210	2	15.79	7.922
753	0.0214	2	56.78	41.643	0.0218	2	146.98	13.280	0.0229	2	14.74	4.969	0.0218	2	169.96	216.964	0.0214	2	60.01	68.290
754	0.0330	3	5.50	6.447	0.0210	2	2.67	3.782	0.0206	2	0.00	0.000	0.0195	2	0.00	0.000	0.0195	2	1.26	1.781
755	n.s.	n.s.	n.s.	n.s.	0.0206	2	0.39	0.550	0.0311	3	0.05	0.090	0.0431	4	0.00	0.000	0.0416	4	0.00	0.000
756	0.0109	1	75.68	-	0.0225	2	199.76	258.188	0.0225	2	124.34	44.457	0.0203	2	31.68	11.829	0.0113	2	11.58	8.167
757	0.0304	3	626.06	753.372	0.0206	2	82.24	100.918	0.0233	2	17.07	3.782	0.0214	2	5.12	6.827	0.0233	2	105.18	148.295
758	0.0214	2	0.60	0.447	0.0105	2	4.03	5.695	0.0214	2	0.31	0.438	0.0210	2	1.32	1.649	0.0218	2	0.16	0.220
759	n.s.	n.s.	n.s.	n.s.	0.0214	2	0.00	0.000	0.0218	2	0.34	0.484	0.0210	2	1.99	2.814	0.0221	2	0.26	0.374
760	0.0105	1	17.16	-	0.0214	2	8.04	5.519	0.0225	2	20.30	28.275	0.0210	2	43.59	58.396	0.0229	2	37.80	37.618
761	0.0315	3	1.21	1.954	0.0206	2	3.47	1.605	0.0210	2	0.00	0.000	0.0221	2	0.19	0.264	0.0225	2	0.25	0.346
762	0.0308	3	0.00	0.000	0.0094	2	0.00	0.000	0.0210	2	18.49	26.142	0.0203	2	0.00	0.000	0.0116	2	0.00	0.000
763	n.s.	n.s.	n.s.	n.s.	0.0218	2	0.08	0.110	0.0311	3	0.00	0.000	0.0416	4	0.30	0.606	0.0330	3	0.00	0.000
764	0.0206	2	0.17	0.237	0.0218	2	0.25	0.352	0.0225	2	0.00	0.000	0.0218	2	0.00	0.000	0.0240	2	0.35	0.205
765	0.0206	2	0.00	0.000	0.0098	2	0.00	0.000	0.0221	2	0.00	0.000	0.0203	2	0.00	0.000	0.0113	2	0.05	0.071
766	0.0308	3	0.00	0.000	0.0191	2	0.00	0.000	0.0218	2	0.00	0.000	0.0214	2	0.00	0.000	0.0203	2	0.44	0.616
767	n.s.	n.s.	n.s.	n.s.	0.0109	2	0.00	0.000	0.0214	2	0.00	0.000	0.0210	2	0.11	0.156	0.0218	2	0.00	0.000

TABLE 10 (cont.).- Swept area, number of hauls and American plaice mean catch (kg) and SD by stratum. Spanish Spring Surveys on NAFO Div. 3NO: 1997-2009. Swept area in square miles. n.s. means stratum not surveyed. 1997-2000 data are transformed C/V *Playa de Menduíña* data, and 2002-2009 data are original from R/V *Vizconde de Eza*. In 2001, there are data from the two vessels.

	2002				2003				2004				2005			
Stratum	Swept area	Tow number	A. Plaice Mean catch	A. Plaice SD	Swept area	Tow number	A. Plaice Mean catch	A. Plaice SD	Swept area	Tow number	A. Plaice Mean catch	A. Plaice SD	Swept area	Tow number	A. Plaice Mean catch	A. Plaice SD
353	0.0476	4	630.50	240.448	0.0334	3	470.86	217.828	0.0338	3	418.60	276.823	0.0353	3	224.63	106.622
354	0.0356	3	207.67	77.048	0.0338	3	806.33	68.178	0.0345	3	220.64	173.634	0.0353	3	220.46	151.511
355	0.0236	2	100.75	40.659	0.0229	2	112.14	7.297	0.0229	2	23.50	9.758	0.0225	2	73.44	60.161
356	0.0233	2	53.95	51.548	0.0225	2	159.80	99.561	0.0221	2	0.66	0.893	0.0233	2	8.37	11.257
357	0.0240	2	5.18	2.015	0.0229	2	59.40	76.650	0.0229	2	0.84	1.190	0.0233	2	0.00	0.000
358	0.0345	3	27.67	21.202	0.0338	3	26.50	16.096	0.0330	3	27.72	15.234	0.0349	3	26.52	20.817
359	0.0686	6	177.40	129.497	0.0791	7	459.09	433.737	0.0791	7	440.97	296.394	0.0814	7	371.26	369.519
360	0.2865	25	143.72	117.177	0.2254	20	229.12	120.612	0.2310	20	283.51	168.955	0.2325	20	293.79	173.170
374	0.0345	3	3.42	1.630	0.0225	2	15.33	4.207	0.0233	2	89.95	46.315	0.0229	2	126.47	116.171
375	0.0353	3	1.41	1.073	0.0330	3	9.96	10.915	0.0338	3	73.12	19.172	0.0349	3	56.44	35.364
376	0.1140	10	47.96	50.207	0.1125	10	62.92	55.173	0.1166	10	195.37	112.407	0.1174	10	177.42	92.305
377	0.0229	2	34.05	39.527	0.0225	2	48.61	30.816	0.0218	2	84.23	73.928	0.0233	2	317.45	167.514
378	0.0233	2	8.10	6.364	0.0225	2	9.42	8.040	0.0225	2	34.30	14.001	0.0225	2	10.15	7.734
379	0.0229	2	5.75	5.445	0.0229	2	3.47	4.667	0.0124	1	0.71	-	0.0236	2	1.37	1.923
380	0.0225	2	7.25	1.768	0.0229	2	6.68	0.735	0.0221	2	2.01	2.174	0.0229	2	0.35	0.488
381	0.0229	2	3.81	2.821	0.0229	2	7.70	3.111	0.0225	2	29.64	18.611	0.0233	2	57.15	57.629
382	0.0341	3	1.09	0.904	0.0454	4	2.12	0.643	0.0461	4	55.76	49.674	0.0458	4	36.82	11.832
721	0.0233	2	18.20	12.445	0.0225	2	222.75	273.155	0.0221	2	0.00	0.000	0.0229	2	0.00	0.000
722	0.0236	2	30.10	42.568	0.0221	2	14.31	15.493	0.0218	2	1.02	1.442	0.0233	2	0.00	0.000
723	0.0233	2	7.20	0.849	0.0229	2	2.10	2.687	0.0229	2	0.68	0.955	0.0233	2	0.00	0.000
724	0.0225	2	47.05	41.931	0.0225	2	7.02	7.050	0.0214	2	0.00	0.000	0.0225	2	0.00	0.000
725	0.0225	2	3.55	4.313	0.0229	2	3.34	0.049	0.0225	2	19.30	27.294	0.0236	2	5.45	7.707
726	0.0214	2	2.83	0.948	0.0225	2	0.00	0.000	0.0225	2	0.00	0.000	0.0113	1	0.00	-
727	0.0233	2	2.85	1.061	0.0218	2	42.85	21.001	0.0233	2	0.37	0.338	0.0229	2	0.00	0.000
728	0.0229	2	9.58	13.467	0.0225	2	40.45	23.264	0.0180	2	0.00	0.000	0.0109	1	0.00	-
752	0.0116	1	0.00	-	0.0229	2	27.05	12.516	0.0214	2	0.00	0.000	0.0236	2	0.00	0.000
753	0.0229	2	3.60	5.091	0.0229	2	0.00	0.000	0.0218	2	0.00	0.000	0.0225	2	0.00	0.000
754	0.0341	3	8.60	14.206	0.0218	2	0.00	0.000	0.0214	2	0.00	0.000	0.0225	2	0.00	0.000
755	0.0338	3	0.00	0.000	0.0221	2	0.00	0.000	0.0319	3	0.00	0.000	0.0450	4	0.00	0.000
756	0.0229	2	11.73	12.551	0.0221	2	1.83	0.884	0.0218	2	0.00	0.000	0.0233	2	0.00	0.000
757	0.0225	2	31.15	13.223	0.0221	2	5.17	7.304	0.0218	2	0.00	0.000	0.0225	2	0.00	0.000
758	0.0225	2	1.27	0.523	0.0221	2	0.00	0.000	0.0214	2	0.00	0.000	0.0225	2	0.00	0.000
759	0.0225	2	0.00	0.000	0.0113	1	0.00	-	0.0214	2	0.00	0.000	0.0229	2	0.00	0.000
760	0.0229	2	4.75	6.718	0.0218	2	0.00	0.000	0.0221	2	0.00	0.000	0.0229	2	6.10	8.627
761	0.0225	2	1.90	1.577	0.0225	2	0.00	0.000	0.0221	2	0.01	0.007	0.0221	2	0.00	0.000
762	0.0225	2	0.30	0.424	0.0225	2	0.00	0.000	0.0233	2	0.00	0.000	0.0225	2	0.00	0.000
763	0.0225	2	0.00	0.000	0.0311	3	0.00	0.000	0.0326	3	0.00	0.000	0.0334	3	0.00	0.000
764	0.0236	2	0.50	0.707	0.0221	2	0.63	0.884	0.0229	2	0.00	0.000	0.0233	2	0.00	0.000
765	0.0236	2	0.64	0.792	0.0113	1	0.00	-	0.0225	2	0.00	0.000	0.0229	2	0.00	0.000
766	0.0233	2	0.00	0.000	0.0225	2	0.00	0.000	0.0225	2	0.00	0.000	0.0229	2	0.00	0.000
767	0.0225	2	0.05	0.071	0.0229	2	0.00	0.000	0.0218	2	0.57	0.799	0.0113	1	0.00	-

TABLE 10 (cont.).- Swept area, number of hauls and American plaice mean catch (kg) and SD by stratum. Spanish Spring Surveys on NAFO Div. 3NO: 1997-2009. Swept area in square miles. n.s. means stratum not surveyed. 1997-2000 data are transformed C/V *Playa de Menduíña* data, and 2002-2009 data are original from R/V *Vizconde de Eza*. In 2001, there are data from the two vessels.

	2006				2007				2008				2009			
Stratum	Swept area	Tow number	A. Plaice Mean catch	A. Plaice SD	Swept area	Tow number	A. Plaice Mean catch	A. Plaice SD	Swept area	Tow number	A. Plaice Mean catch	A. Plaice SD	Swept area	Tow number	A. Plaice Mean catch	A. Plaice SD
353	0.0371	3	321.42	64.587	0.0364	3	115.27	45.889	0.0341	3	336.90	112.352	0.0345	3	124.75	50.324
354	0.0364	3	134.53	130.027	0.0364	3	73.70	29.781	0.0345	3	103.03	62.742	0.0338	3	96.97	70.613
355	0.0248	2	32.85	27.506	0.0240	2	24.70	8.344	0.0221	2	20.48	4.273	0.0233	2	13.40	1.697
356	0.0240	2	4.38	6.194	0.0240	2	0.42	0.598	0.0236	2	0.96	0.040	0.0229	2	1.19	1.677
357	0.0244	2	6.82	9.378	0.0360	3	0.62	0.939	0.0233	2	1.70	0.314	0.0116	2	0.80	1.131
358	0.0349	3	22.10	19.361	0.0368	3	34.98	32.739	0.0345	3	39.39	42.958	0.0341	3	21.82	15.033
359	0.0975	8	329.81	332.590	0.0855	7	399.00	357.447	0.0799	7	375.96	201.963	0.0795	7	446.02	401.637
360	0.2340	19	562.23	459.478	0.2378	20	297.23	200.496	0.2340	20	466.27	307.740	0.2273	20	174.64	109.378
374	0.0236	2	120.64	27.344	0.0240	2	214.10	141.421	0.0233	2	466.75	331.138	0.0225	2	136.26	21.008
375	0.0364	3	55.90	18.748	0.0364	3	55.44	62.196	0.0334	3	160.00	97.194	0.0341	3	132.23	107.005
376	0.1219	10	136.03	74.695	0.1185	10	122.53	76.602	0.1129	10	144.19	139.315	0.1133	10	87.85	85.740
377	0.0236	2	242.64	52.446	0.0240	2	275.55	170.625	0.0233	2	638.00	162.069	0.0225	2	487.92	674.127
378	0.0240	2	21.65	15.203	0.0233	2	31.32	27.407	0.0240	2	20.67	18.717	0.0229	2	78.74	72.917
379	0.0236	2	0.12	0.171	0.0240	2	1.04	1.440	0.0229	2	0.19	0.269	0.0229	2	10.85	15.344
380	0.0229	2	0.00	0.000	0.0240	2	1.77	0.750	0.0225	2	22.59	22.712	0.0229	2	9.50	6.647
381	0.0229	2	6.43	6.824	0.0240	2	155.55	150.119	0.0229	2	54.85	20.860	0.0229	2	3.85	0.502
382	0.0469	4	44.32	11.998	0.0484	4	15.69	11.851	0.0458	4	21.36	17.470	0.0450	4	0.63	0.824
721	0.0236	2	0.00	0.000	0.0116	1	0.00	-	0.0225	2	0.00	0.000	0.0229	2	0.60	0.849
722	0.0240	2	0.00	0.000	0.0225	2	0.00	0.000	0.0206	2	0.00	0.000	0.0225	2	0.00	0.000
723	0.0236	2	0.04	0.049	0.0240	2	0.00	0.000	0.0225	2	0.81	1.147	0.0225	2	0.17	0.240
724	0.0233	2	0.00	0.000	0.0233	2	0.00	0.000	0.0221	2	2.39	3.374	0.0233	2	0.00	0.000
725	0.0233	2	1.02	1.385	0.0225	2	2.66	3.638	0.0229	2	0.22	0.311	0.0229	2	0.66	0.933
726	0.0225	2	0.20	0.287	0.0229	2	0.22	0.311	0.0225	2	0.00	0.000	0.0229	2	51.30	72.549
727	0.0225	2	0.00	0.000	0.0240	2	0.00	0.000	0.0221	2	2.80	0.431	0.0113	1	547.30	-
728	0.0225	2	0.00	0.000	0.0225	2	0.00	0.000	0.0221	2	0.00	0.000	0.0229	2	246.60	306.319
752	0.0225	2	0.07	0.092	0.0225	2	0.72	0.346	0.0218	2	0.00	0.000	0.0229	2	0.05	0.064
753	0.0225	2	0.00	0.000	0.0225	2	0.00	0.000	0.0221	2	0.00	0.000	0.0116	1	0.00	-
754	0.0225	2	0.00	0.000	0.0225	2	0.00	0.000	0.0218	2	0.00	0.000	0.0113	1	0.00	-
755	0.0338	3	0.00	0.000	0.0338	3	0.00	0.000	0.0431	4	0.00	0.000	0.0116	1	0.00	-
756	0.0229	2	0.00	0.000	0.0225	2	0.00	0.000	0.0218	2	0.00	0.000	0.0225	2	0.00	0.000
757	0.0225	2	0.14	0.191	0.0229	2	0.00	0.000	0.0221	2	0.00	0.000	0.0229	2	0.00	0.000
758	0.0225	2	0.00	0.000	0.0225	2	0.00	0.000	0.0218	2	0.00	0.000	0.0225	2	0.00	0.000
759	0.0225	2	0.00	0.000	n.s.	n.s.	n.s.	n.s.	0.0221	2	0.00	0.000	0.0113	1	0.00	-
760	0.0225	2	0.00	0.000	0.0233	2	0.00	0.000	0.0225	2	0.00	0.000	0.0229	2	0.00	0.000
761	0.0233	2	0.00	0.000	0.0225	2	0.00	0.000	0.0214	2	0.00	0.000	0.0225	2	0.00	0.000
762	0.0233	2	0.00	0.000	n.s.	n.s.	n.s.	n.s.	0.0214	2	0.00	0.000	0.0225	2	0.00	0.000
763	0.0225	2	0.00	0.000	n.s.	n.s.	n.s.	n.s.	0.0311	3	0.00	0.000	n.s.	n.s.	n.s.	n.s.
764	0.0233	2	0.00	0.000	0.0225	2	0.00	0.000	0.0221	2	0.00	0.000	0.0116	1	0.00	-
765	0.0236	2	0.00	0.000	0.0225	2	0.00	0.000	0.0214	2	0.00	0.000	0.0225	2	0.00	0.000
766	0.0229	2	0.00	0.000	n.s.	n.s.	n.s.	n.s.	0.0218	2	0.00	0.000	0.0225	2	0.19	0.269
767	0.0233	2	0.00	0.000	n.s.	n.s.	n.s.	n.s.	0.0214	2	0.00	0.000	n.s.	n.s.	n.s.	n.s.

TABLE 11.- Stratified mean catches (Kg) by stratum and year and SD by year of American plaice (1997-2009). n.s. means stratum not surveyed. 1997-2000 data are transformed C/V *Playa de Menduíña* data. 2002-2009 data are original from R/V *Vizconde de Eza*. In 2001, there are data from the two vessels.

Stratum	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
353	12903.67	72078.57	104632.35	114599.70	121339.62	169604.50	126660.44	112602.50	60426.37	86461.08	31006.73	90626.10	33558.20
354	8402.49	93846.24	45293.87	36269.52	42363.66	51086.00	198357.18	54277.44	54233.57	33093.23	18130.20	25346.20	23855.44
355	1037.72	9965.35	4500.63	4440.80	15299.50	7455.50	8298.36	1739.00	5434.56	2430.90	1827.80	1515.63	991.60
356	382.89	668.59	1478.94	1321.33	3927.32	2535.65	7510.60	30.95	393.39	205.86	19.88	44.98	55.74
357	304.55	382.45	502.29	90.77	12602.58	848.70	9741.60	138.01	0.00	1118.23	101.68	279.46	131.20
358	999.88	1513.72	2037.49	67195.07	8055.00	6225.00	5962.50	6236.25	5966.25	4972.28	7870.50	8862.75	4910.10
359	12680.29	83608.73	204132.53	277756.52	146459.89	74685.40	193275.09	185648.37	156301.96	138849.75	167979.00	158277.96	187774.42
360	72766.01	299247.75	734066.28	903798.01	728547.66	399985.01	637653.48	789018.07	817625.50	1564674.81	827191.09	1297629.41	486023.12
374	1796.59	856.16	9415.49	1197.73	3199.30	731.88	3279.55	19249.30	27063.51	25815.89	45817.40	99884.50	29158.57
375	500.53	1606.63	11438.83	8160.97	1291.77	381.21	2698.26	19816.42	15294.34	15149.44	15024.24	43360.00	35834.33
376	16719.30	110620.38	159942.67	334810.31	62631.30	63978.64	83931.28	260619.58	236676.28	181467.22	163455.02	192352.13	117198.30
377	2095.72	4718.47	8616.07	2702.20	2108.50	3405.00	4861.00	8422.50	31745.00	24263.50	27555.00	63800.00	48792.00
378	259.32	726.10	991.91	2744.49	382.25	1125.90	1308.69	4767.70	1411.06	3009.35	4353.48	2872.44	10944.86
379	188.36	281.25	82.40	243.73	88.51	609.50	367.82	75.26	145.22	12.83	109.76	20.14	1150.10
380	134.92	162.68	213.43	167.31	285.07	696.00	641.28	193.20	33.12	0.00	169.92	2168.64	912.00
381	222.76	1211.16	84.85	291.71	338.05	547.92	1108.80	4268.16	8229.60	925.20	22399.20	7898.40	553.68
382	202.64	1493.12	770.56	657.24	1037.19	372.73	726.30	19126.54	12628.40	15200.90	5382.01	7328.02	214.72
721	871.09	499.21	1303.60	273.96	7488.00	1183.00	14478.75	0.00	0.00	0.00	0.00	0.00	39.00
722	3919.11	167.16	203.73	101.86	2544.36	2528.40	1201.62	85.68	0.00	0.00	0.00	0.00	0.00
723	1362.72	1556.71	5277.38	1653.10	5603.25	1116.00	325.50	104.63	0.00	5.43	0.00	125.71	26.35
724	1653.48	1343.68	1226.09	1526.83	3281.87	5834.20	869.86	0.00	0.00	0.00	0.00	295.86	0.00
725	137.94	65.30	260.04	907.63	353.82	372.75	350.18	2026.50	572.25	107.21	279.25	23.10	69.30
726	n.s	212.68	2876.79	593.27	129.33	203.76	0.00	0.00	0.00	14.62	15.84	0.00	3693.60
727	899.68	865.65	725.35	440.29	811.92	273.60	4113.60	35.42	0.00	0.00	0.00	268.32	52540.80
728	2502.92	1215.08	2958.88	1780.30	455.96	747.05	3155.10	0.00	0.00	0.00	0.00	0.00	19234.80
752	14763.59	6543.72	4674.08	16785.97	2068.61	0.00	3543.55	0.00	0.00	8.52	94.52	0.00	5.90
753	7835.24	20283.24	2033.90	23454.24	8281.50	496.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00
754	989.34	481.33	0.00	0.00	226.67	1548.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
755	n.s	149.64	19.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
756	7643.89	20175.92	12558.72	3200.13	1169.09	1184.23	184.33	0.00	0.00	0.00	0.00	0.00	0.00
757	63857.75	8388.77	1741.19	522.51	10728.11	3177.30	526.83	0.00	0.00	13.77	0.00	0.00	0.00
758	59.81	398.64	30.63	130.83	15.39	125.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00
759	n.s	0.00	43.44	252.73	33.57	0.00	0.00	0.00	0.00	0.00	n.s	0.00	0.00
760	2643.21	1237.81	3126.85	6713.38	5821.20	731.50	0.00	0.00	939.40	0.00	0.00	0.00	0.00
761	206.83	592.85	0.00	31.90	41.90	324.05	0.00	0.86	0.00	0.00	0.00	0.00	0.00
762	0.00	0.00	3918.87	0.00	0.00	63.60	0.00	0.00	0.00	0.00	n.s	0.00	0.00
763	n.s	20.29	0.00	79.13	0.00	0.00	0.00	0.00	0.00	0.00	n.s	0.00	n.s
764	16.71	24.87	0.00	0.00	34.50	50.00	62.50	0.00	0.00	0.00	0.00	0.00	0.00
765	0.00	0.00	0.00	0.00	6.20	79.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00
766	0.00	0.00	0.00	0.00	62.68	0.00	0.00	0.00	0.00	0.00	n.s	0.00	27.36
767	n.s	0.00	0.00	17.44	0.00	7.90	0.00	89.27	0.00	0.00	n.s	0.00	n.s
TOTAL	240961	747210	1331180	1814913	1199115	804322	1315194	1488572	1435120	2097800	1338783	2002980	1057695
$\overline{Y}$	25.80	72.25	128.72	175.49	115.95	77.77	127.17	143.93	138.77	202.84	141.82	193.67	106.59
S.D.	5.09	6.51	6.85	19.24	12.31	7.46	10.79	13.03	12.92	29.01	15.31	20.39	11.31

TABLE 12.- Survey estimates (by the swept area method) of American plaice biomass (t) and SD by stratum and year on NAFO Div. 3NO. n.s. means stratum not surveyed. 1997-2000 data are transformed C/V *Playa de Menduíña* data. 2002-2009 data are original from R/V *Vizconde de Eza*. In 2001, there are data from the two vessels.

Stratum	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
353	1075	6200	8719	9651	10666	14245	11385	10009	5143	6987	2557	7967	2918
354	723	7903	4165	3054	3766	4302	17632	4720	4616	2729	1495	2204	2120
355	89	901	393	382	1275	631	726	152	483	196	152	137	85
356	34	60	129	117	327	218	668	3	34	17	2	4	5
357	28	32	43	7	1034	71	852	12	0	92	8	24	23
358	89	130	175	5907	700	541	530	567	513	428	642	771	432
359	1103	7192	16836	23702	12775	6530	17099	16424	13445	11393	13753	13871	16345
360	6203	25808	59988	75434	60151	34903	56586	68313	70333	127046	69585	110908	42774
374	153	73	773	100	267	64	292	1656	2366	2185	3818	8592	2592
375	43	140	968	670	115	32	245	1761	1316	1249	1239	3898	3150
376	1479	9578	13124	27901	5422	5612	7461	22347	20164	14890	13794	17041	10349
377	180	413	718	236	184	298	432	774	2731	2054	2296	5488	4337
378	25	62	87	236	32	97	116	424	125	251	374	239	957
379	18	24	7	22	8	53	32	6	12	1	9	2	101
380	13	14	18	14	28	62	56	17	3	0	14	193	80
381	20	106	7	25	29	48	97	379	708	81	1867	691	48
382	18	131	64	53	88	33	64	1659	1104	1297	445	641	19
721	79	49	107	23	605	102	1287	0	0	0	0	0	3
722	367	16	18	9	219	214	109	8	0	0	0	0	0
723	130	134	461	134	467	96	28	9	0	0	0	11	2
724	147	130	109	131	279	519	77	0	0	0	0	27	0
725	13	8	23	86	30	33	31	180	48	9	25	2	6
726	n.s.	21	256	54	11	19	0	0	0	1	1	0	323
727	96	74	61	42	72	24	378	3	0	0	0	24	4670
728	234	118	255	170	40	65	280	0	0	0	0	0	1682
752	1358	572	402	1628	197	143	310	0	0	1	8	0	1
753	733	1865	178	2157	775	43	0	0	0	0	0	0	0
754	90	46	0	0	23	6	0	0	0	0	0	0	0
755	n.s.	15	2	0	0	0	0	0	0	0	0	0	0
756	703	1793	1116	316	102	104	17	0	0	0	0	0	0
757	6307	813	150	49	923	282	48	0	0	1	0	0	0
758	6	37	3	12	1	11	0	0	0	0	0	0	0
759	n.s.	0	4	24	3	0	0	0	0	0	n.s	0	0
760	252	116	278	639	509	64	0	0	82	0	0	0	0
761	20	57	0	3	4	29	0	0	0	0	0	0	0
762	0	0	373	0	0	6	0	0	0	0	n.s	0	0
763	n.s.	2	0	8	0	0	0	0	0	0	n.s	0	n.s.
764	2	2	0	0	3	4	6	0	0	0	0	0	0
765	0	0	0	0	1	7	0	0	0	0	0	0	0
766	0	0	0	0	6	0	0	0	0	0	n.s	0	2
767	n.s.	0	0	2	0	1	0	8	0	0	n.s	0	n.s.
TOTAL	21827	64635	110010	152997	101137	69511	116842	129432	123227	170910	112086	172735	93025
S.D.	4495	5946	5825	16740	10841	7097	9777	12335	11396	24806	13032	17696	10258

TABLE 13.- Length weight relationships in the calculation of American plaice biomass. The equation is $Weight = a(l + 0.5)^b$ Spanish Spring Surveys on NAFO Div. 3NO: 1997-2009. To calculate the parameters for the indeterminate individuals, we used the total data (males + females + indeterminate individuals)

		1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Males	a	0.0043	0.0041	0.0049	0.0024	0.0064	0.0041	0.0037	0.0075	0.0027	0.0061	0.0050	0.0042	0.0054
		E = 0.1296	E = 0.1200	E = 0.2799	E = 0.1281	E = 0.1556	E = 0.0660	E = 0.0752	E = 0.1483	E = 0.0882	E = 0.1501	E = 0.0603	E = 0.0551	Error = 0.0842
	b	3.1794	3.1943	3.1454	3.3523	3.0742	3.1930	3.2287	3.0284	3.3274	3.0860	3.1406	3.1878	3.1082
		E = 0.0378	E = 0.0348	E = 0.0817	E = 0.0382	E = 0.0485	E = 0.0205	E = 0.0234	E = 0.0468	E = 0.0274	E = 0.0458	E = 0.0185	E = 0.0173	Error = 0.0261
		R^2 = 0.995	R^2 = 0.996	R^2 = 0.983	R^2 = 0.995	R^2 = 0.992	R^2 = 0.988	R^2 = 0.998	R2 = 0.992	R2 = 0.997	R2 = 0.996	R2 = 0.999	R2 = 0.999	R2 = 0.997
		N = 1050	N = 573	N = 183	N = 321	N = 188	N = 384	N = 622	N = 411	N = 311	N = 434	N= 645	N= 429	N= 305
Females	a	0.0027	0.0027	0.0048	0.0020	0.0039	0.0032	0.0030	0.0047	0.0027	0.0049	0.0048	0.0031	0.0027
		E = 0.1058	E = 0.0595	E = 0.1420	E = 0.0981	E = 0.0624	E = 0.0628	E = 0.0549	E = 0.0807	E = 0.0634	E = 0.0781	E = 0.0719	E = 0.0579	Error = 0.0690
	b	3.3263	3.3218	3.1704	3.4049	3.2256	3.2752	3.2918	3.1757	3.3290	3.1703	3.1754	3.2870	3.3232
		E = 0.0291	E = 0.0162	E = 0.0389	E = 0.0271	E = 0.0177	E = 0.0178	E = 0.0157	E = 0.0228	E = 0.0177	E = 0.0219	E = 0.0206	E = 0.0163	Error = 0.0191
		R2 = 0.998	R2 = 0.999	R2 = 0.993	R2 = 0.998	R2 = 0.998	R2 = 0.998	R2 = 0.999	R2 = 0.997	R2 = 0.998	R2 = 0.999	R2 = 0.9974	R2 = 0.999	R2 = 0.997
		N = 1396	N = 937	N = 201	N = 402	N = 370	N = 703	N = 960	N = 765	N = 569	N = 757	N= 1000	N= 768	N= 559
Indet.	a	0.0026	0.0028	0.0022	0.0020	0.0054	0.0035	0.0032	0.0069	0.0025	0.0045	0.0041	0.0030	0.0048
		E = 0.0928	E = 0.0602	E = 0.1531	E = 0.0817	E = 0.0866	E = 0.0599	E = 0.0581	E = 0.1315	E = 0.0523	E = 0.0483	E = 0.0493	E = 0.0428	Error = 0.1173
	b	3.3370	3.3153	3.3812	3.4049	3.1409	3.2527	3.2795	3.0712	3.3552	3.1868	3.2121	3.2912	3.1692
		E = 0.0255	E = 0.0164	E = 0.0431	E = 0.0226	E = 0.0248	E = 0.0171	E = 0.0167	E = 0.0382	E = 0.0148	E = 0.0138	E = 0.0142	E = 0.0122	Error = 0.0337
		R^2 = 0.997	R^2 = 0.999	R^2 = 0.989	R^2 = 0.997	R^2 = 0.996	R^2 = 0.998	R^2 = 0.998	R2 = 0.990	R2 = 0.999	R2 = 0.999	R2 = 0.999	R2 = 0.999	R2 = 0.990
		N = 2446	N = 1513	N = 386	N = 726	N = 573	N = 1087	N = 1587	N = 1226	N = 884	N = 1213	N= 1699	N= 1212	N= 876

TABLE 14.- American plaice length distribution. Estimated numbers per haul stratified mean catches. Spanish Spring Survey on NAFO 3NO: 1997-2009. Indet. means indeterminate. 1997-2000 data are transformed C/V *Playa de Menduíña* data. 2002-2009 data are original R/V *Vizconde de Eza* data. In 2001, there are data from the two vessels. (*) indicates untransformed data.

	1997				1998				1999				2000				2001			
Lenght (cm.)	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total
2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.045	0.045
6	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.021	2.401	2.422
8	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.021	0.031	1.194	1.245
10	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	17.087	5.812	22.898	0.203	10.681	0.227	11.111	0.280	1.972	0.217	2.469
12	0.000	0.000	0.000	0.000	0.007	0.008	0.000	0.015	0.000	4.272	4.272	8.543	11.240	11.450	0.117	22.807	3.620	4.188	0.757	8.565
14	0.073	0.049	0.000	0.121	0.009	0.000	0.000	0.009	0.289	1.667	0.190	2.146	30.021	34.561	0.000	64.582	5.797	7.593	0.398	13.788
16	0.136	0.242	0.000	0.378	0.546	0.263	0.000	0.809	1.474	2.739	0.000	4.212	59.167	75.997	0.000	135.164	10.535	10.617	0.031	21.183
18	0.648	0.705	0.023	1.377	0.044	0.146	0.000	0.190	0.210	0.894	0.000	1.104	24.333	41.298	0.005	65.635	48.738	38.461	0.010	87.210
20	1.215	0.750	0.000	1.966	0.370	0.163	0.000	0.533	0.398	0.508	0.000	0.906	4.514	5.307	0.000	9.821	69.747	56.807	0.000	126.554
22	2.337	1.371	0.000	3.708	1.053	0.693	0.000	1.746	0.765	0.857	0.000	1.622	2.416	2.785	0.000	5.201	36.774	35.802	0.000	72.576
24	2.605	1.883	0.000	4.489	3.474	2.310	0.000	5.784	2.904	0.468	0.000	3.372	1.722	1.695	0.000	3.417	7.776	13.101	0.000	20.877
26	4.484	2.641	0.000	7.126	5.241	3.713	0.000	8.954	10.069	2.129	0.000	12.197	2.762	0.685	0.000	3.447	3.211	3.416	0.000	6.627
28	8.809	2.201	0.000	11.010	8.847	4.872	0.000	13.719	19.126	7.192	0.000	26.318	7.298	1.581	0.000	8.879	4.639	1.994	0.000	6.633
30	7.228	3.773	0.000	11.001	11.342	5.977	0.000	17.319	29.710	11.614	0.000	41.323	18.574	3.666	0.000	22.240	11.353	1.499	0.000	12.852
32	5.657	4.242	0.000	9.898	10.173	8.235	0.000	18.408	24.357	10.595	0.000	34.952	25.029	7.213	0.000	32.242	18.793	2.218	0.000	21.012
34	3.662	4.350	0.000	8.012	7.537	13.315	0.000	20.852	16.253	10.386	0.000	26.638	15.779	13.921	0.000	29.699	15.703	4.001	0.000	19.705
36	1.897	4.574	0.000	6.471	4.471	15.805	0.000	20.276	9.405	18.159	0.000	27.564	9.881	16.429	0.000	26.310	8.760	9.830	0.000	18.591
38	0.964	3.885	0.000	4.849	2.240	15.381	0.000	17.621	4.435	20.646	0.000	25.081	4.817	18.573	0.000	23.390	3.802	11.082	0.000	14.884
40	0.359	3.021	0.000	3.381	0.785	12.615	0.000	13.400	1.846	23.474	0.000	25.320	2.094	26.863	0.000	28.957	1.392	13.048	0.000	14.440
42	0.205	1.968	0.000	2.173	0.462	8.995	0.000	9.457	0.370	18.287	0.000	18.657	1.180	25.649	0.000	26.828	0.889	13.008	0.000	13.897
44	0.182	1.128	0.000	1.310	0.117	6.272	0.000	6.388	0.467	12.030	0.000	12.497	0.465	19.940	0.000	20.404	0.354	11.312	0.000	11.666
46	0.039	0.666	0.000	0.705	0.119	3.702	0.000	3.821	0.043	6.881	0.000	6.924	0.266	13.733	0.000	13.999	0.060	8.611	0.000	8.672
48	0.006	0.433	0.000	0.438	0.025	2.391	0.000	2.416	0.020	4.457	0.000	4.478	0.233	8.588	0.000	8.821	0.000	5.567	0.000	5.567
50	0.003	0.385	0.000	0.388	0.000	1.132	0.000	1.132	0.000	3.395	0.000	3.395	0.031	6.231	0.000	6.263	0.000	3.461	0.000	3.461
52	0.000	0.158	0.000	0.158	0.000	0.476	0.000	0.476	0.000	1.747	0.000	1.747	0.092	3.692	0.000	3.784	0.000	1.021	0.000	1.021
54	0.000	0.122	0.000	0.122	0.023	0.380	0.000	0.404	0.000	1.360	0.000	1.360	0.000	3.440	0.000	3.440	0.000	1.245	0.000	1.245
56	0.000	0.047	0.000	0.047	0.000	0.301	0.000	0.301	0.000	0.938	0.000	0.938	0.000	1.172	0.000	1.172	0.010	0.755	0.000	0.765
58	0.000	0.037	0.000	0.037	0.000	0.314	0.000	0.314	0.000	0.432	0.000	0.432	0.000	1.290	0.000	1.290	0.000	0.546	0.000	0.546
60	0.000	0.034	0.000	0.034	0.000	0.306	0.000	0.306	0.000	0.401	0.000	0.401	0.000	1.120	0.000	1.120	0.000	0.335	0.000	0.335
62	0.000	0.054	0.000	0.054	0.000	0.103	0.000	0.103	0.000	0.047	0.000	0.047	0.000	1.168	0.000	1.168	0.000	0.250	0.000	0.250
64	0.000	0.057	0.000	0.057	0.000	0.122	0.000	0.122	0.000	0.298	0.000	0.298	0.000	0.637	0.000	0.637	0.000	0.045	0.000	0.045
66	0.000	0.008	0.000	0.008	0.000	0.045	0.000	0.045	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.078	0.000	0.078
68	0.000	0.011	0.000	0.011	0.000	0.091	0.000	0.091	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.000	0.004
70	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.086	0.000	0.086	0.000	0.016	0.000	0.016
72	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.018	0.000	0.018	0.000	0.000	0.000	0.000
74	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
76	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.054	0.000	0.054	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Total	40.511	38.798	0.023	79.332	56.883	108.124	0.000	165.008	122.141	183.012	10.273	315.426	222.117	359.467	0.348	581.933	252.254	261.936	5.053	519.242
Nº samples (*):				116				108				93				96				81
Nº Ind. (*):	8297	5729	3	14029	4640	7390	0	12030	4541	7742	4	12287	3732	7721	5	11458	4996	7906	114	13016
Sampled catch:				1390				1617				1858				1697				3388
Range (*):				14-68				13-68				10-77				11-72				5-70
Total catch:				4209				8540				10565				15533				11477
Total hauls (*):				128				124				114				118				123

TABLE 14 (cont.).- American plaice length distribution. Estimated numbers per haul stratified mean catches. Spanish Spring Survey on NAFO 3NO: 1997-2009. Indet. means indeterminate. 1997-2000 data are transformed C/V *Playa de Menduíña* data. 2002-2009 data are original R/V *Vizconde de Eza* data. In 2001, there are data from the two vessels. (*) indicates untransformed data.

	2002				2003				2004				2005			
Length (cm.)	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total
2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
6	0.000	0.000	0.052	0.052	0.188	0.044	0.287	0.519	0.084	0.090	8.701	8.875	0.014	0.007	0.513	0.534
8	0.005	0.133	0.013	0.152	0.356	0.223	0.056	0.635	1.027	0.746	49.783	51.556	0.172	0.400	1.875	2.446
10	0.853	1.420	0.091	2.365	0.074	0.142	0.065	0.280	0.133	0.271	6.226	6.630	1.474	1.177	0.099	2.750
12	4.606	6.883	0.135	11.625	0.814	0.891	0.000	1.705	1.164	1.209	0.004	2.377	29.728	22.828	0.062	52.618
14	3.250	3.490	0.027	6.768	1.576	1.005	0.000	2.581	6.529	4.615	0.000	11.145	46.137	45.635	0.056	91.828
16	1.688	2.104	0.000	3.792	6.969	5.441	0.000	12.410	3.692	3.184	0.000	6.875	22.245	20.487	0.000	42.733
18	6.588	6.831	0.000	13.420	17.873	13.925	0.000	31.798	1.904	1.239	0.000	3.143	6.715	6.709	0.000	13.424
20	10.751	8.917	0.000	19.668	7.441	7.791	0.000	15.232	4.051	3.190	0.000	7.241	6.343	5.253	0.000	11.596
22	26.930	17.681	0.000	44.611	14.162	8.973	0.000	23.135	18.341	8.930	0.000	27.271	3.618	3.026	0.000	6.644
24	34.971	33.222	0.000	68.193	35.284	11.606	0.000	46.890	18.592	14.481	0.000	33.073	7.908	3.341	0.000	11.249
26	21.342	29.173	0.000	50.515	62.238	21.586	0.000	83.823	27.188	10.344	0.000	37.532	17.567	6.709	0.000	24.276
28	7.317	13.800	0.000	21.117	42.882	44.576	0.000	87.458	46.289	14.760	0.000	61.048	31.709	13.734	0.000	45.444
30	5.530	4.861	0.000	10.391	17.283	42.818	0.000	60.100	36.904	23.718	0.000	60.622	46.328	13.928	0.000	60.256
32	7.801	1.697	0.000	9.498	11.921	19.885	0.000	31.805	17.960	43.845	0.000	61.804	32.463	16.433	0.000	48.896
34	7.563	1.390	0.000	8.953	11.256	8.363	0.000	19.618	10.580	42.211	0.000	52.791	14.535	26.469	0.000	41.005
36	5.397	1.575	0.000	6.973	8.333	3.467	0.000	11.800	6.172	20.482	0.000	26.654	7.360	35.775	0.000	43.134
38	2.528	4.239	0.000	6.767	4.505	2.965	0.000	7.470	3.628	6.955	0.000	10.583	3.353	24.246	0.000	27.600
40	1.263	6.464	0.000	7.726	1.685	4.476	0.000	6.161	1.587	4.815	0.000	6.402	0.745	10.301	0.000	11.046
42	0.411	8.085	0.000	8.496	0.475	7.659	0.000	8.135	0.582	5.407	0.000	5.990	0.202	4.700	0.000	4.903
44	0.164	6.918	0.000	7.081	0.147	6.731	0.000	6.877	0.183	6.655	0.000	6.838	0.057	3.419	0.000	3.477
46	0.031	5.848	0.000	5.878	0.063	6.855	0.000	6.917	0.109	7.216	0.000	7.325	0.164	3.433	0.000	3.597
48	0.018	3.791	0.000	3.810	0.000	5.653	0.000	5.653	0.000	5.071	0.000	5.071	0.090	2.990	0.000	3.080
50	0.024	2.186	0.000	2.210	0.000	3.517	0.000	3.517	0.008	3.552	0.000	3.559	0.107	2.272	0.000	2.379
52	0.051	1.614	0.000	1.666	0.000	3.150	0.000	3.150	0.000	2.925	0.000	2.925	0.049	1.634	0.000	1.683
54	0.000	1.152	0.000	1.152	0.000	2.273	0.000	2.273	0.000	2.326	0.000	2.326	0.000	1.531	0.000	1.531
56	0.000	0.720	0.000	0.720	0.000	1.159	0.000	1.159	0.059	1.604	0.000	1.663	0.000	1.546	0.000	1.546
58	0.000	0.351	0.000	0.351	0.000	0.804	0.000	0.804	0.000	1.066	0.000	1.066	0.000	0.905	0.000	0.905
60	0.000	0.231	0.000	0.231	0.000	0.447	0.000	0.447	0.000	0.271	0.000	0.271	0.000	0.753	0.000	0.753
62	0.000	0.139	0.000	0.139	0.000	0.073	0.000	0.073	0.000	0.294	0.000	0.294	0.000	0.407	0.000	0.407
64	0.000	0.020	0.000	0.020	0.000	0.222	0.000	0.222	0.000	0.162	0.000	0.162	0.000	0.174	0.000	0.174
66	0.000	0.101	0.000	0.101	0.000	0.032	0.000	0.032	0.000	0.132	0.000	0.132	0.000	0.302	0.000	0.302
68	0.000	0.006	0.000	0.006	0.000	0.000	0.000	0.000	0.000	0.049	0.000	0.049	0.000	0.081	0.000	0.081
70	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
72	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
74	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
76	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Total	149.083	175.044	0.319	324.447	245.522	236.752	0.407	482.682	206.765	241.817	64.714	513.296	279.087	280.604	2.603	562.294
Nº samples (*):				108				91				75				70
Nº Ind. (*):	5873	7234	12	13119	6122	7333	9	13464	5076	7561	1353	13990	6097	8494	62	14653
Sampled catch:				3675				3885				4614				4556
Range (*):				7-68				6-66				6-68				6-69
Total catch:				9201				13955				13729				13193
Total hauls (*):				125				118				120				119

TABLE 14 (cont.).- American plaice length distribution. Estimated numbers per haul stratified mean catches. Spanish Spring Survey on NAFO 3NO: 1997-2009. Indet. means indeterminate. 1997-2000 data are transformed C/V *Playa de Menduíña* data. 2002-2009 data are original R/V *Vizconde de Eza* data. In 2001, there are data from the two vessels. (*) indicates untransformed data.

	2006				2007				2008				2009			
Length (cm.)	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total
2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.017	0.017
4	0.000	0.000	0.000	0.000	0.000	0.000	0.159	0.159	0.000	0.000	0.000	0.000	0.000	0.000	0.084	0.084
6	0.043	0.000	0.096	0.139	0.357	0.306	2.373	3.036	0.022	0.000	0.394	0.416	0.009	0.009	1.252	1.269
8	0.019	0.010	0.095	0.124	0.756	0.622	1.006	2.384	0.594	0.777	0.399	1.770	0.323	0.255	1.828	2.406
10	0.072	0.060	0.000	0.131	0.117	0.112	0.045	0.275	16.878	13.351	7.196	37.425	0.624	0.443	0.831	1.899
12	2.843	2.168	0.000	5.011	0.273	0.273	0.019	0.565	13.308	12.346	4.442	30.097	1.056	0.761	0.151	1.968
14	8.939	8.049	0.000	16.989	0.409	0.230	0.000	0.639	3.366	2.820	0.067	6.252	3.309	2.975	0.097	6.380
16	15.983	14.714	0.000	30.697	1.201	1.058	0.000	2.259	1.881	1.781	0.000	3.662	6.313	7.598	0.068	13.978
18	68.546	51.271	0.000	119.817	7.895	7.011	0.000	14.906	2.321	1.569	0.043	3.934	3.348	4.013	0.000	7.361
20	95.356	94.226	0.000	189.583	18.350	11.397	0.000	29.748	10.242	6.556	0.000	16.798	2.673	2.552	0.000	5.225
22	33.891	37.382	0.000	71.273	44.794	25.820	0.000	70.614	35.516	17.364	0.000	52.881	5.638	3.474	0.000	9.112
24	16.301	12.507	0.000	28.808	49.297	38.741	0.000	88.038	64.851	29.146	0.000	93.997	13.784	5.481	0.000	19.265
26	18.093	10.179	0.000	28.272	25.290	24.747	0.000	50.037	63.778	56.716	0.000	120.494	23.336	12.973	0.000	36.309
28	32.376	6.712	0.000	39.087	20.585	12.655	0.000	33.240	33.117	50.360	0.000	83.477	21.745	23.534	0.000	45.279
30	57.378	11.702	0.000	69.080	25.139	7.487	0.000	32.626	34.622	22.353	0.000	56.975	17.699	24.519	0.000	42.217
32	48.434	22.092	0.000	70.526	25.351	7.517	0.000	32.868	32.584	12.761	0.000	45.345	13.522	15.402	0.000	28.924
34	26.510	20.787	0.000	47.297	16.904	10.904	0.000	27.809	20.248	10.758	0.000	31.007	11.775	8.900	0.000	20.675
36	12.445	26.465	0.000	38.909	6.664	14.769	0.000	21.433	11.713	15.283	0.000	26.996	5.686	8.568	0.000	14.254
38	4.025	37.156	0.000	41.181	4.007	18.315	0.000	22.321	3.739	20.729	0.000	24.468	2.408	11.090	0.000	13.498
40	1.775	28.755	0.000	30.530	1.327	21.746	0.000	23.074	1.600	26.714	0.000	28.314	0.838	15.607	0.000	16.445
42	0.304	12.994	0.000	13.297	0.463	15.291	0.000	15.754	0.410	22.139	0.000	22.548	0.306	13.462	0.000	13.768
44	0.216	6.821	0.000	7.037	0.137	7.011	0.000	7.148	0.284	14.339	0.000	14.623	0.034	9.311	0.000	9.346
46	0.014	3.300	0.000	3.314	0.118	4.045	0.000	4.163	0.155	7.483	0.000	7.638	0.031	4.344	0.000	4.376
48	0.037	3.481	0.000	3.518	0.044	2.998	0.000	3.041	0.138	4.261	0.000	4.399	0.027	2.823	0.000	2.850
50	0.000	3.394	0.000	3.394	0.051	1.920	0.000	1.970	0.059	2.428	0.000	2.487	0.037	1.730	0.000	1.768
52	0.000	2.126	0.000	2.126	0.010	1.822	0.000	1.832	0.000	2.126	0.000	2.126	0.027	1.477	0.000	1.504
54	0.000	1.451	0.000	1.451	0.000	1.783	0.000	1.783	0.000	1.597	0.000	1.597	0.000	1.421	0.000	1.421
56	0.000	2.357	0.000	2.357	0.000	1.473	0.000	1.473	0.000	1.754	0.000	1.754	0.000	1.246	0.000	1.246
58	0.000	1.581	0.000	1.581	0.000	1.065	0.000	1.065	0.000	1.454	0.000	1.454	0.000	0.855	0.000	0.855
60	0.000	0.763	0.000	0.763	0.000	0.707	0.000	0.707	0.000	0.928	0.000	0.928	0.000	0.745	0.000	0.745
62	0.000	0.300	0.000	0.300	0.000	0.475	0.000	0.475	0.000	0.843	0.000	0.843	0.000	0.262	0.000	0.262
64	0.000	0.200	0.000	0.200	0.000	0.449	0.000	0.449	0.000	0.486	0.000	0.486	0.000	0.256	0.000	0.256
66	0.000	0.088	0.000	0.088	0.000	0.068	0.000	0.068	0.000	0.089	0.000	0.089	0.000	0.070	0.000	0.070
68	0.000	0.019	0.000	0.019	0.000	0.039	0.000	0.039	0.000	0.030	0.000	0.030	0.000	0.006	0.000	0.006
70	0.000	0.015	0.000	0.015	0.000	0.015	0.000	0.015	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
72	0.000	0.014	0.000	0.014	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
74	0.000	0.000	0.000	0.000	0.000	0.015	0.000	0.015	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
76	0.000	0.006	0.000	0.006	0.000	0.000	0.000	0.000	0.000	0.028	0.000	0.028	0.000	0.000	0.000	0.000
Total	443.600	423.144	0.191	866.936	249.539	242.885	3.602	496.025	351.426	361.373	12.541	725.340	134.548	186.163	4.328	325.039
Nº samples (*):				73				75				75				76
Nº Ind. (*):	5942	8030	20	13992	5356	6995	163	12514	5439	7861	247	13547	4571	6451	263	11285
Sampled catch:				5906				4342				4318				3964
Range (*):				6-77				5-75				6-77				3-69
Total catch:				17334				12282				17867				11219
Total hauls (*):				120				111				122				109

TABLE 15.- American plaice age numbers per haul mean catches by sex and year. Number per stratified mean catches. Spanish Spring Survey on NAFO 3NO: 1997-2009. Indet. means indeterminate. 1997-2000 data are transformed C/V *Playa de Menduíña* data. 2002-2009 data are original R/V *Vizconde de Eza* data. In 2001, there are data from the two vessels.

	1997				1998				1999				2000				2001			
Age	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total
1																	0.02	0.02	1.76	1.80
2	0.05	0.05		0.10	0.14	0.01		0.15		16.05	5.74	21.79	19.25	31.09	0.19	50.52	10.71	12.12	2.68	25.51
3	1.06	0.89	0.01	1.96	0.28	0.16		0.45	0.78	9.11	4.49	14.37	73.87	115.31	0.16	189.34	135.76	120.45	0.60	256.81
4	2.49	2.31	0.01	4.80	2.83	3.04		5.87	1.78	2.32	0.04	4.14	36.19	31.67	0.00	67.85	38.91	39.15	0.01	78.07
5	2.99	3.15	0.00	6.14	4.14	4.44		8.58	10.45	2.44		12.89	5.46	5.54	0.00	11.00	2.09	2.72		4.81
6	11.99	7.93		19.92	8.52	5.73		14.25	24.16	13.76		37.92	12.33	7.31		19.64	9.78	1.66		11.44
7	15.93	9.81		25.74	14.20	15.79		29.99	15.93	16.22		32.15	24.53	25.18		49.71	18.82	11.77		30.59
8	5.19	8.49		13.68	19.26	29.24		48.49	28.20	14.33		42.53	20.83	18.66		39.49	12.20	16.30		28.50
9	0.78	3.77		4.55	6.22	27.61		33.83	31.52	29.00		60.52	23.00	28.90		51.90	14.72	12.44		27.17
10	0.00	1.26		1.26	0.92	12.76		13.68	7.40	42.71		50.12	5.44	41.54		46.98	6.82	13.62		20.44
11	0.03	0.45		0.48	0.27	5.12		5.39	1.74	18.72		20.46	0.86	28.23		29.09	2.40	18.80		21.20
12		0.40		0.40	0.04	1.93		1.97	0.20	8.99		9.19	0.34	13.21		13.56		8.26		8.26
13		0.12		0.12	0.06	0.89		0.95		5.00		5.00	0.02	6.36		6.38		2.27		2.27
14		0.11		0.11		1.03		1.03		1.87		1.87		0.97		0.97		0.96		0.96
15		0.03		0.03		0.19		0.19		1.20		1.20		3.32		3.32		0.76		0.76
16		0.04		0.04		0.09		0.09		0.48		0.48		1.59		1.59	0.01	0.21		0.22
17										0.39		0.39		0.48		0.48		0.20		0.20
18		0.01		0.01		0.05		0.05		0.35		0.35						0.17		0.17
19		0.01		0.01		0.05		0.05										0.02		0.02
20										0.05		0.05		0.10		0.10		0.01		0.01
21																				
Total	40.51	38.80	0.02	79.33	56.88	108.12	0.00	165.01	122.14	183.01	10.27	315.43	222.12	359.47	0.35	581.93	252.25	261.94	5.05	519.24

	2002				2003				2004				2005			
Age	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total
1	0.00	0.01	0.04	0.05	0.14	0.27	0.25	0.65	0.17	0.84	55.58	56.59	0.03	0.41	1.28	1.71
2	4.54	6.04	0.20	10.78	2.75	1.28	0.16	4.19	8.18	3.18	9.13	20.50	38.79	36.13	1.26	76.18
3	10.72	14.24	0.08	25.04	19.77	15.58		35.35	6.48	6.59	0.00	13.07	69.41	60.61	0.06	130.08
4	75.72	89.62		165.33	36.63	21.35		57.98	19.63	15.40		35.03	8.67	8.40		17.07
5	21.83	16.57		38.40	119.14	116.03		235.17	45.07	31.73		76.80	27.91	12.71		40.63
6	7.53	3.88		11.40	25.58	30.85		56.43	98.55	106.16		204.71	57.34	34.11		91.46
7	8.07	1.98		10.04	18.36	4.17		22.53	16.71	30.43		47.14	50.92	70.21		121.13
8	13.57	5.27		18.84	12.33	4.58		16.91	7.92	4.91		12.83	13.57	28.80		42.37
9	4.41	9.87		14.28	8.42	11.00		19.43	2.88	8.29		11.17	9.76	8.06		17.82
10	1.65	7.22		8.86	1.94	6.17		8.11	1.02	10.93		11.95	2.39	3.72		6.11
11	0.98	9.69		10.67	0.44	8.06		8.50	0.00	6.44		6.44	0.21	4.18		4.39
12	0.06	7.39		7.45	0.02	10.40		10.41	0.09	7.80		7.90	0.05	4.25		4.29
13		1.84		1.84		3.88		3.88		4.39		4.39	0.05	3.25		3.30
14		1.03		1.03		1.73		1.73	0.02	3.78		3.80		2.38		2.38
15		0.09		0.09		0.78		0.78	0.02	0.64		0.66		1.76		1.76
16		0.27		0.27		0.48		0.48	0.02	0.19		0.21		0.82		0.82
17		0.05		0.05		0.11		0.11						0.09		0.09
18						0.04		0.04		0.08		0.08		0.63		0.63
19		0.01		0.01						0.02		0.02		0.08		0.08
20																
21																
Total	149.08	175.04	0.32	324.45	245.52	236.75	0.41	482.68	206.77	241.82	64.71	513.30	279.09	280.60	2.60	562.29

TABLE 15 (Cont.).- American plaice age numbers per haul mean catches by sex and year. Number per stratified mean catches. Spanish Spring Survey on NAFO 3NO: 1997-2009. Indet. means indeterminate. 1997-2000 data are transformed C/V *Playa de Menduíña* data. 2002-2009 data are original R/V *Vizconde de Eza* data. In 2001, there are data from the two vessels.

	2006				2007				2008				2009			
Age	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total
1	0.02	0.00	0.05	0.07	0.33	1.04	3.57	4.94	0.09	2.68	1.04	3.81	0.04	0.26	2.30	2.61
2	5.21	4.16	0.07	9.44	0.90	0.27	0.02	1.20	29.90	24.70	10.55	65.15	1.87	0.67	1.01	3.55
3	60.27	50.37	0.01	110.64	5.85	4.69	0.01	10.55	5.62	4.12	0.92	10.66	14.41	15.56	1.01	30.98
4	75.01	73.94		148.95	94.05	64.74		158.79	22.17	11.54	0.03	33.75	2.42	4.30	0.01	6.74
5	39.42	33.00		72.41	46.57	51.08		97.64	174.32	108.29	0.00	282.61	31.55	18.96		50.51
6	38.48	20.24		58.72	21.39	12.24		33.62	46.47	75.53		121.99	40.02	57.15		97.16
7	37.44	26.08		63.52	39.20	21.94		61.14	22.46	14.48		36.95	16.48	18.60		35.08
8	27.97	25.85		53.82	22.85	22.24		45.09	32.67	42.44		75.11	12.25	7.40		19.65
9	15.48	24.12		39.60	14.83	41.97		56.80	15.13	23.78		38.91	7.33	9.84		17.17
10	3.44	14.08		17.51	1.96	8.95		10.92	1.94	30.63		32.57	5.88	17.25		23.13
11	0.71	7.41		8.12	1.54	2.22		3.75	0.51	8.40		8.91	1.91	18.63		20.54
12	0.03	4.39		4.42	0.08	2.99		3.07	0.16	4.53		4.69	0.23	7.79		8.02
13	0.00	2.37		2.37	0.01	2.23		2.24		1.69		1.69	0.10	1.40		1.50
14		1.56		1.56		2.27		2.27		2.44		2.44	0.02	1.09		1.11
15		1.01		1.01		1.92		1.92		2.36		2.36	0.02	2.29		2.31
16		0.52		0.52		0.79		0.79		2.46		2.46	0.03	1.92		1.95
17		0.21		0.21		0.41		0.41		0.73		0.73		1.62		1.62
18		0.15		0.15		0.66		0.66		0.02		0.02		0.86		0.86
19		0.03		0.03		0.00		0.00		0.24		0.24		0.37		0.37
20		0.02		0.02		0.23		0.23		0.01		0.01		0.20		0.20
21										0.29		0.29				0.00
Total	303.48	289.49	0.13	593.10	249.54	242.88	3.60	496.03	351.43	361.37	12.54	725.34	134.55	186.16	4.33	325.04

TABLE 16.- American plaice mean length (cm) per haul mean catches by sex and year. Number per stratified mean catches. Spanish Spring Survey on NAFO 3NO: 1997-2009. Indet. means indeterminate. 1997-2000 data are transformed C/V *Playa de Menduíña* data. 2002-2009 data are original R/V *Vizconde de Eza* data. In 2001, there are data from the two vessels.

	1997				1998				1999				2000				2001			
Age	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total
1																	9.00	7.20	7.08	7.10
2	16.20	16.36		16.28	16.88	13.00		16.68		11.05	11.31	11.12	15.47	15.70	11.39	15.60	15.13	14.58	9.83	14.31
3	20.00	19.84	19.00	19.92	16.90	17.00		16.93	16.63	14.09	12.64	13.77	16.41	16.23	12.13	16.30	20.78	20.88	12.84	20.81
4	22.71	23.32	19.00	23.00	24.68	26.67		25.71	19.69	19.26	15.00	19.40	18.45	18.96	19.00	18.69	21.21	21.58	17.72	21.39
5	24.88	25.92	19.00	25.41	26.09	27.79		26.97	28.04	27.20		27.88	21.51	20.88	19.00	21.19	29.82	29.77		29.79
6	28.79	30.21		29.35	29.13	28.81		29.00	29.95	30.69		30.22	30.78	32.45		31.40	31.33	34.37		31.77
7	31.63	34.77		32.82	31.33	33.73		32.59	31.27	32.35		31.81	32.24	35.87		34.08	33.26	36.76		34.61
8	35.20	38.91		37.50	33.54	36.78		35.49	32.33	35.83		33.51	33.57	37.63		35.49	34.31	39.83		37.46
9	40.00	41.66		41.38	35.26	40.19		39.28	33.76	38.53		36.05	35.23	40.61		38.22	35.60	40.82		37.99
10	49.00	45.60		45.60	39.49	42.52		42.31	36.58	41.18		40.50	39.01	42.85		42.41	35.60	43.15		40.63
11	47.61	47.57		47.57	44.30	45.94		45.86	40.90	44.01		43.75	42.80	45.58		45.50	36.57	45.57		44.55
12		51.85		51.85	46.10	49.16		49.09	43.85	46.89		46.83	50.18	48.57		48.61		47.80		47.80
13		56.49		56.49	50.67	51.38		51.34		49.44		49.44	51.00	52.68		52.68		51.72		51.72
14		62.46		62.46		59.22		59.22		53.85		53.85		54.91		54.91		50.96		50.96
15		62.46		62.46		58.52		58.52		56.43		56.43		59.15		59.15		58.43		58.43
16		63.31		63.31		63.83		63.83		57.41		57.41		60.23		60.23	57.00	61.94		61.72
17										61.54		61.54		62.98		62.98		58.49		58.49
18		68.56		68.56		68.67		68.67		62.71		62.71						61.80		61.80
19		69.00		69.00		69.00		69.00										65.00		65.00
20										77.00		77.00		71.34		71.34		71.00		71.00
21																				
Total	30.05	34.53	19.00	32.24	31.58	37.85		35.69	31.84	35.48	11.91	33.30	23.60	29.26	11.78	27.09	24.09	28.07	9.24	25.95

TABLE 16 (Cont.).- American plaice mean length (cm) per haul mean catches by sex and year. Number per stratified mean catches. Spanish Spring Survey on NAFO 3NO: 1997-2009. Indet. means indeterminate. 1997-2000 data are transformed C/V *Playa de Menduíña* data. 2002-2009 data are original R/V *Vizconde de Eza* data. In 2001, there are data from the two vessels. (*) indicates untransformed data.

	2002				2003				2004				2005			
Age	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total
1	9.00	9.00	7.07	7.52	7.64	8.67	7.45	7.99	8.51	8.78	8.79	8.79	8.50	8.97	8.47	8.58
2	13.03	12.65	11.48	12.79	14.00	13.17	8.61	13.54	14.09	14.28	9.73	12.18	14.01	14.60	9.09	14.21
3	18.06	18.13	13.27	18.08	19.79	19.55		19.68	18.31	16.23	13.00	17.26	15.94	15.81	14.15	15.88
4	23.99	24.99		24.53	22.84	21.16		22.22	24.11	25.41		24.68	22.82	20.41		21.64
5	26.15	27.62		26.79	27.20	29.31		28.24	26.66	27.17		26.87	27.26	27.98		27.49
6	29.59	30.84		30.01	29.74	31.44		30.67	29.90	33.11		31.57	30.21	31.40		30.66
7	32.15	37.21		33.14	31.52	35.54		32.26	33.18	34.84		34.25	32.14	35.83		34.28
8	34.40	39.20		35.74	35.69	38.92		36.56	35.47	38.87		36.78	34.35	38.45		37.14
9	35.89	41.82		39.99	36.88	42.31		39.95	39.32	42.08		41.36	34.79	40.92		37.56
10	38.57	44.54		43.43	39.04	46.18		44.48	41.33	44.53		44.25	39.18	44.52		42.43
11	41.10	46.24		45.77	38.37	46.69		46.26	51.00	46.82		46.82	44.85	47.50		47.38
12	52.00	49.28		49.30	45.00	49.13		49.12	45.10	49.10		49.06	49.73	48.33		48.34
13		50.73		50.73		52.73		52.73		51.99		51.99	53.00	51.06		51.09
14		55.21		55.21		53.75		53.75	57.00	55.83		55.84		54.96		54.96
15		57.62		57.62		58.22		58.22	57.00	64.15		63.94		57.83		57.83
16		63.51		63.51		61.98		61.98	57.00	51.00		51.57		58.81		58.81
17		63.00		63.00		61.00		61.00						65.00		65.00
18						63.00		63.00		63.48		63.48		65.10		65.10
19		66.96		66.96						69.00		69.00		66.93		66.93
20																
21																
Total	25.86	29.44	11.45	27.78	27.26	31.64	7.91	29.39	28.32	33.90	8.92	28.50	24.69	28.90	8.91	26.72

	2006				2007				2008				2009			
Age	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total
1	7.20	9.00	7.25	7.25	8.28	8.63	7.51	7.80	8.74	10.42	9.11	10.02	8.81	8.93	7.87	7.99
2	15.50	15.99	8.41	15.66	8.73	13.00	11.78	9.77	12.10	12.37	11.74	12.14	12.60	13.37	9.58	11.89
3	19.54	19.60	9.00	19.57	19.17	18.93	13.00	19.05	14.17	15.11	12.19	14.36	18.12	17.55	11.40	17.61
4	21.01	21.26		21.14	24.00	24.58		24.24	24.35	22.67	17.78	23.77	21.12	21.49	13.78	21.34
5	25.10	24.24		24.71	25.25	26.01		25.64	25.76	26.73	19.00	26.13	27.04	27.33		27.15
6	29.99	32.29		30.78	29.07	28.88		29.00	30.17	29.87		29.98	28.23	30.61		29.63
7	31.96	35.60		33.45	31.74	36.82		33.57	33.56	34.22		33.82	31.41	33.60		32.57
8	33.27	38.01		35.55	33.21	39.08		36.10	34.40	39.42		37.23	34.91	36.27		35.42
9	34.26	39.76		37.61	33.69	40.65		38.83	34.66	41.07		38.58	35.04	40.47		38.15
10	35.99	41.53		40.44	39.69	43.42		42.75	37.09	43.22		42.85	33.37	42.26		40.00
11	38.10	45.00		44.40	37.86	49.04		44.46	42.38	45.32		45.15	35.65	42.54		41.90
12	45.38	49.22		49.19	47.89	50.89		50.81	44.01	51.17		50.93	40.24	45.40		45.25
13	48.62	52.74		52.70	53.00	53.38		53.38		52.71		52.71	44.37	49.62		49.28
14		55.82		55.82		52.62		52.62		51.62		51.62	45.00	54.34		54.20
15		58.33		58.33		55.83		55.83		56.20		56.20	45.00	47.41		47.39
16		59.62		59.62		61.37		61.37		57.16		57.16	49.00	54.05		53.98
17		60.67		60.67		58.62		58.62		56.56		56.56		58.50		58.50
18		62.83		62.83		58.48		58.48		69.00		69.00		59.13		59.13
19		65.88		65.88		75.00		75.00		55.87		55.87		52.45		52.45
20		73.07				65.21		65.21		77.00		77.00		65.71		65.71
21										63.66		63.66				
Total	25.66	29.05	7.99	27.31	27.33	32.44	7.55	29.69	26.68	31.69	11.57	28.92	28.26	34.00	9.10	31.29

TABLE 17.- Amercian plaice mean weight (gr) per haul mean catches by sex and year. Number per stratified mean catches. Spanish Spring Survey on NAFO 3NO: 1997-2009. Indet. means indeterminate. 1997-2000 data are transformed C/V *Playa de Menduíña* data. 2002-2009 data are original R/V *Vizconde de Eza* data. In 2001, there are data from the two vessels. (*) indicates untransformed data.

	1997				1998				1999				2000				2001			
Age	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total
1																	5.52	2.36	2.58	2.61
2	30.58	30.09		30.32	34.08	13.56		33.00		9.81	8.24	9.40	24.78	26.73	8.24	25.92	28.14	24.01	8.97	24.16
3	60.98	59.53	48.25	60.25	34.14	33.05		33.75	34.19	23.00	12.02	20.17	29.96	28.38	10.43	28.98	74.66	74.78	17.85	74.58
4	90.53	102.43	48.25	96.16	115.88	160.85		139.18	65.34	60.28	21.02	62.07	45.19	47.76	45.86	46.39	80.14	84.04	45.36	82.09
5	122.41	143.19	48.25	133.03	142.60	176.64		160.21	180.39	180.47		180.40	85.85	67.41	45.86	76.56	224.47	241.89		234.33
6	192.63	236.88		210.25	197.61	195.48		196.75	219.78	253.61		232.06	240.11	293.64		260.03	259.90	361.60		274.64
7	259.54	373.88		303.10	252.15	331.81		294.09	253.60	300.02		277.02	282.85	409.54		347.02	312.53	459.67		369.14
8	368.81	542.51		476.56	311.29	438.62		388.05	282.41	415.58		327.29	323.42	484.21		399.40	345.34	585.81		482.85
9	548.18	678.61		656.33	368.71	590.74		549.92	323.00	523.92		419.27	379.83	622.11		514.73	385.35	636.37		500.33
10	1019.79	911.38		911.53	526.59	713.13		700.57	414.67	642.60		608.93	537.06	743.81		719.87	392.43	762.73		639.11
11	933.18	1064.95		1055.90	746.72	910.89		902.75	585.62	796.73		778.79	724.88	923.47		917.61	425.17	899.33		845.69
12		1384.64		1384.64	841.32	1137.44		1130.94	726.28	971.49		966.25	1221.32	1139.85		1141.90		1053.94		1053.94
13		1843.51		1843.51	1157.79	1325.51		1315.68		1140.42		1140.42	1283.48	1494.13		1493.61		1356.99		1356.99
14		2580.03		2580.03		2111.99		2111.99		1495.55		1495.55		1707.48		1707.48		1291.89		1291.89
15		2565.46		2565.46		2027.53		2027.53		1727.69		1727.69		2232.76		2232.76		1981.57		1981.57
16		2681.12		2681.12		2684.74		2684.74		1828.20		1828.20		2334.60		2334.60	1607.50	2379.43		2344.69
17										2283.43		2283.43		2736.30		2736.30		1989.94		1989.94
18		3491.89		3491.89		3415.05		3415.05		2413.08		2413.08						2364.16		2364.16
19		3564.93		3564.93		3468.37		3468.37										2776.59		2776.59
20										4610.97		4610.97		4149.65		4149.65		3691.44		3691.44
21																				
Total	233.91	421.32	48.25	325.51	268.47	527.64		438.29	276.33	519.04	9.94	408.48	153.75	393.67	9.49	301.87	142.91	305.31	7.85	223.52

	2002				2003				2004				2005			
Age	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total
1	4.53	4.27	2.03	2.55	2.77	3.78	2.40	3.05	5.04	4.74	5.53	5.52	3.49	4.05	3.33	3.51
2	15.31	13.47	10.57	14.19	20.82	14.97	4.43	18.40	23.80	22.39	8.27	16.66	18.32	21.44	4.47	19.57
3	48.02	51.69	16.15	50.00	61.32	57.36		59.58	53.80	34.33	18.13	43.98	29.37	29.28	18.27	29.32
4	107.46	126.02		117.52	96.29	73.44		87.88	118.24	148.37		131.49	103.39	67.26		85.60
5	141.66	175.42		156.23	162.64	209.46		185.74	162.74	177.90		169.00	165.83	187.83		172.71
6	213.89	247.39		225.28	219.41	263.99		243.78	224.80	324.26		276.38	234.71	271.80		248.54
7	273.99	454.37		309.50	265.20	406.54		291.34	311.03	377.96		354.24	285.75	415.68		361.06
8	336.57	541.72		393.92	386.93	539.83		428.35	375.48	540.09		438.48	357.86	519.53		467.77
9	388.21	662.77		577.97	432.35	692.92		579.94	507.87	698.52		649.34	371.97	637.50		492.07
10	482.17	812.73		751.27	515.51	927.79		829.32	597.92	832.90		812.86	558.48	852.01		737.11
11	584.61	928.89		897.25	489.24	958.75		934.29	1108.14	964.46		964.56	885.54	1066.20		1057.75
12	1234.38	1142.20		1142.96	804.42	1130.44		1129.93	764.27	1117.01		1112.85	1209.09	1120.37		1121.31
13		1256.80		1256.80		1432.20		1432.20		1335.85		1335.85	1480.60	1334.19		1336.37
14		1645.89		1645.89		1516.23		1516.23	1551.96	1679.11		1678.45		1711.56		1711.56
15		1875.93		1875.93		1958.44		1958.44	1551.96	2585.25		2554.39		2022.18		2022.18
16		2589.45		2589.45		2416.37		2416.37	1551.96	1243.96		1273.41		2136.98		2136.98
17		2499.50		2499.50		2266.74		2266.74						2953.40		2953.40
18						2520.70		2520.70		2522.62		2522.62		2986.58		2986.58
19		3061.95		3061.95						3248.73		3248.73		3266.33		3266.33
20																
21																
Total	156.68	311.92	11.07	240.29	180.42	351.16	3.20	264.02	206.83	417.77	5.92	280.87	166.30	329.92	4.24	247.20

TABLE 17 (Cont.).- American plaice mean weight (gr) per haul mean catches by sex and year. Number per stratified mean catches. Spanish Spring Survey on NAFO 3NO: 1997-2009. Indet. means indeterminate. 1997-2000 data are transformed C/V *Playa de Menduíña* data. 2002-2009 data are original R/V *Vizconde de Eza* data. In 2001, there are data from the two vessels.

	2006				2007				2008				2009			
Age	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total
1	2.78	5.14	2.58	2.65	4.27	4.78	2.89	3.38	4.29	6.95	4.95	6.34	4.71	3.91	3.66	3.70
2	30.35	33.38	4.18	31.48	4.71	16.44	11.67	7.53	12.40	12.59	10.27	12.13	15.57	15.57	6.52	13.01
3	61.78	64.12	5.00	62.84	55.34	55.17	15.64	55.23	22.78	25.18	11.98	22.78	48.56	40.16	12.13	43.15
4	77.10	81.96		79.51	111.98	129.47		119.11	118.25	90.13	40.62	108.56	76.16	75.60	19.72	75.70
5	138.74	133.07		136.15	134.70	157.85		146.81	136.06	153.88	48.66	142.89	158.84	165.60		161.38
6	229.61	310.73		257.57	207.31	222.78		212.94	223.30	228.00		226.21	178.31	240.78		215.05
7	275.74	413.68		332.37	266.40	459.13		335.57	312.76	356.92		330.07	249.10	329.32		291.64
8	312.24	504.70		404.67	310.14	565.10		435.92	338.15	548.87		457.21	338.70	421.12		369.73
9	342.78	580.80		487.76	321.87	626.56		547.02	349.85	629.35		520.68	346.87	602.13		493.19
10	401.15	670.26		617.44	531.30	771.08		727.92	440.91	738.16		720.46	302.78	687.49		589.67
11	480.60	871.24		837.04	468.28	1130.82		859.49	670.52	862.19		851.32	383.25	712.14		681.60
12	808.17	1152.76		1150.11	949.59	1286.96		1278.61	737.72	1308.02		1289.01	530.64	884.69		874.41
13	986.79	1423.36		1422.33	1299.93	1488.33		1487.52		1407.83		1407.83	743.40	1171.05		1143.31
14		1692.58		1692.58		1443.88		1443.88		1373.08		1373.08	739.15	1582.24		1569.22
15		1940.19		1940.19		1706.32		1706.32		1794.17		1794.17	739.15	1060.60		1058.23
16		2083.56		2083.56		2291.03		2291.03		1865.85		1865.85	963.13	1562.03		1553.62
17		2198.82		2198.82		2011.95		2011.95		1830.42		1830.42		2032.21		2032.21
18		2446.73		2446.73		1986.34		1986.34		3377.64		3377.64		2087.80		2087.80
19		2836.06		2836.06		4294.54		4294.54		1713.65		1713.65		1471.99		1471.99
20		3941.25				2759.42		2759.42		4844.08		4844.08		2950.82		2950.82
21										2614.61		2614.61				
Total	165.03	307.24	3.61	234.41	183.20	395.68	2.98	285.93	176.11	364.62	10.04	267.16	197.81	429.98	6.34	328.23

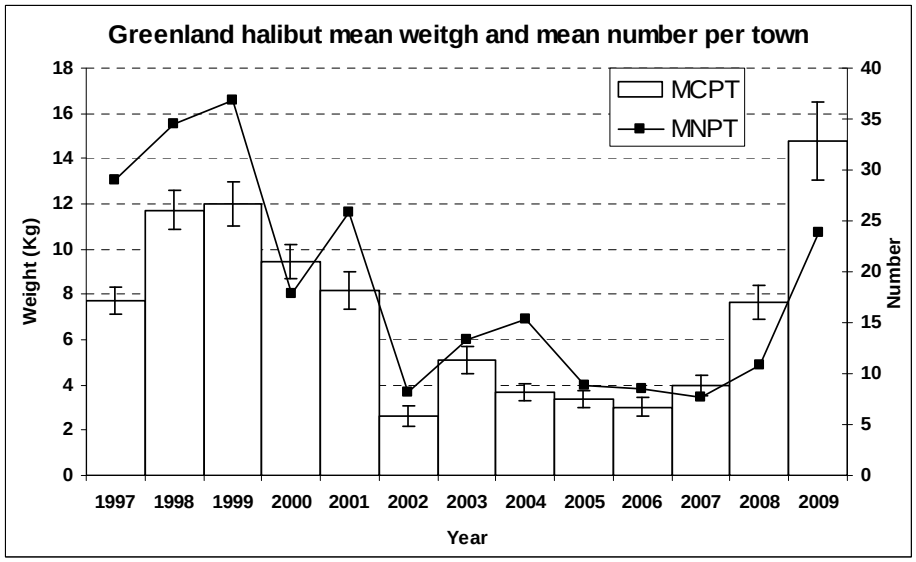

FIGURE 1.- Greenland halibut stratified mean catches in Kg and ±SD by year. Spanish Spring surveys on NAFO Div. 3NO: 1997-2009 (1997-2000 transformed data from C/V *Playa de Menduíña*; 2002-2009 original data from R/V *Vizconde de Eza*. In 2001, there are data from the two vessels).

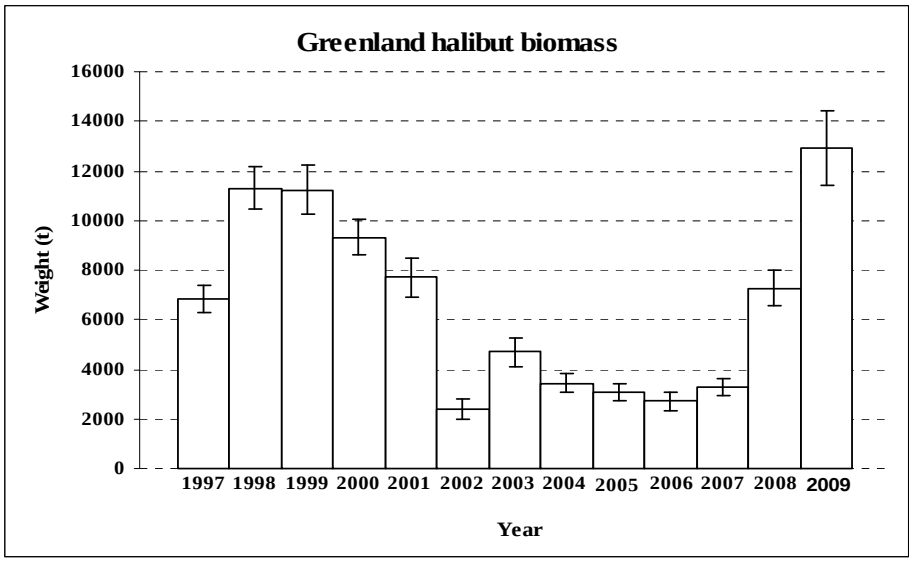

FIGURE 2.- Greenland halibut biomass calculated by the swept method in tons and ±SD by year. Spanish Spring surveys on NAFO Div. 3NO: 1997-2009 (1997-2000 transformed data from C/V *Playa de Menduíña*; 2002-2009 original data from R/V *Vizconde de Eza*. In 2001, there are data from the two vessels).

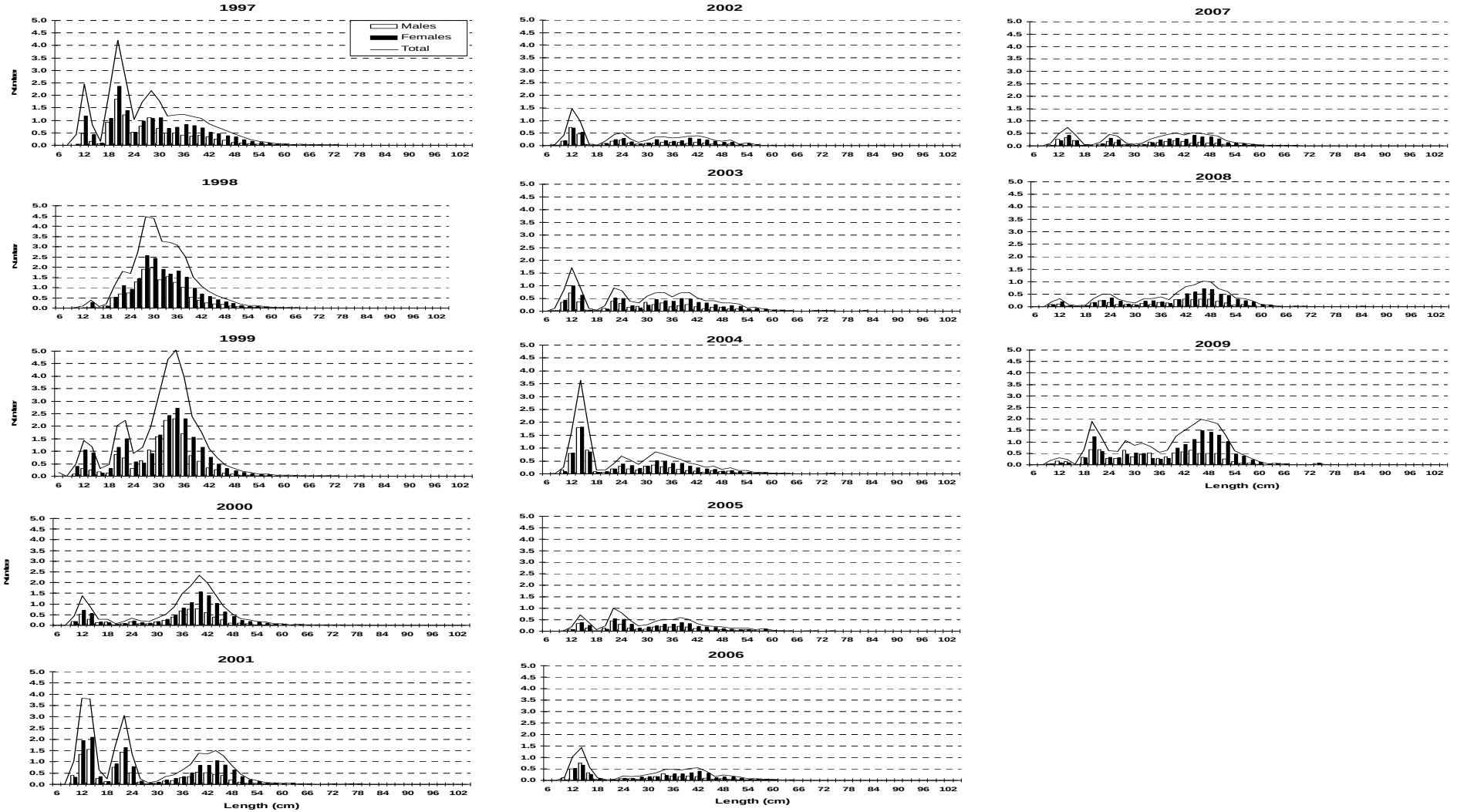

FIGURE 3.- Greenland halibut length distribution (cm) on NAFO 3NO: 1997-2009. Number per stratified mean catches. 1997-2000 data are transformed data from C/V *Playa de Menduíña*, and 2002-2009 data are original from R/V *Vizconde de Eza*. In 2001, there are data from the two vessels.

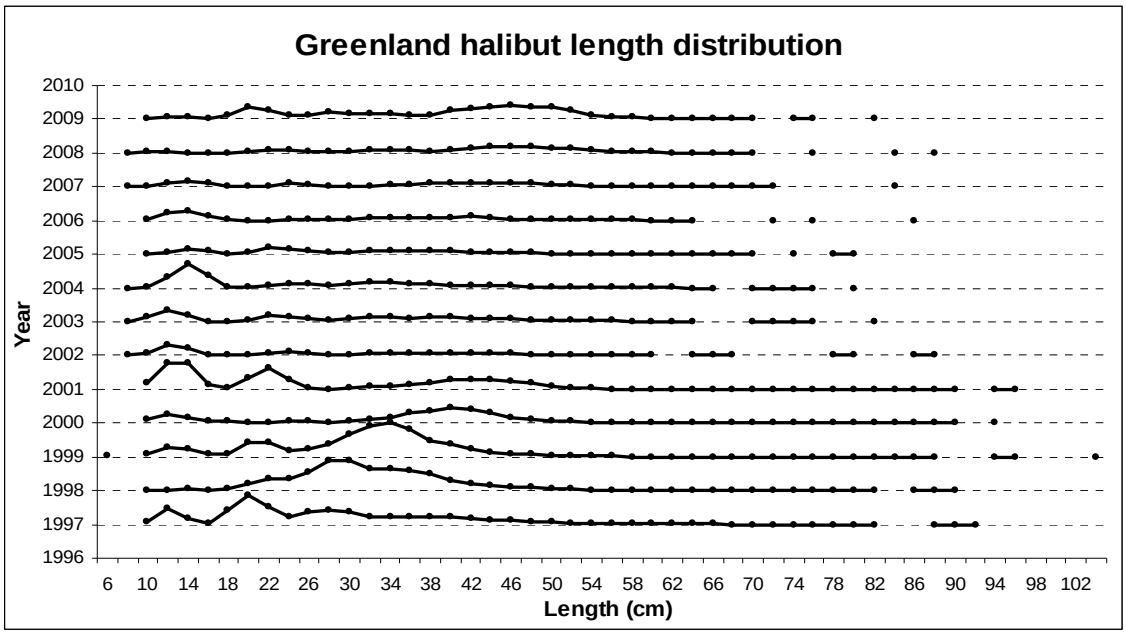

FIGURE 4.- Greenland halibut length distribution (cm) on NAFO 3NO: 1997-2009.

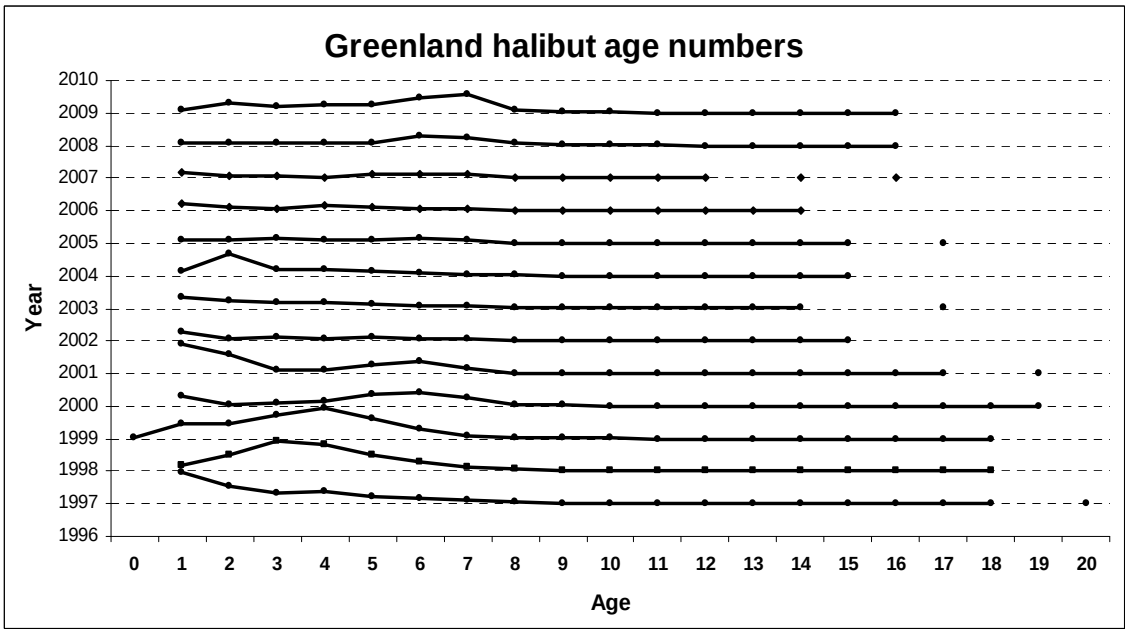

FIGURE 5.- Greenland halibut age distribution on NAFO 3NO: 1997-2009.

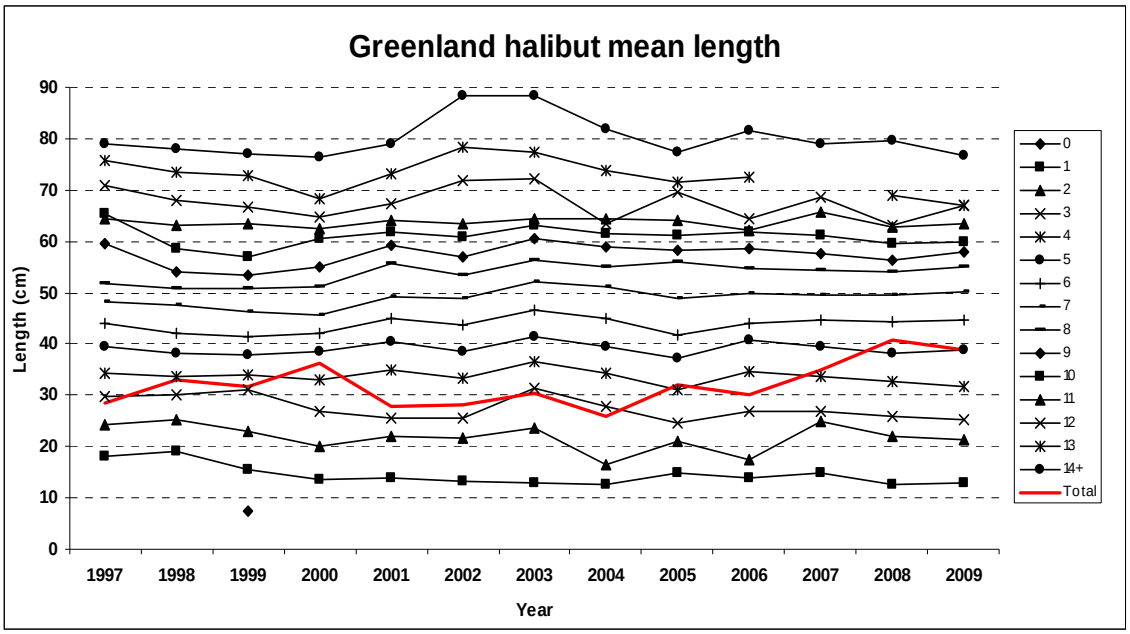

FIGURE 6.- Greenland halibut mean length (cm) at age on NAFO 3NO: 1997-2009. Ages from 0 to 14+.

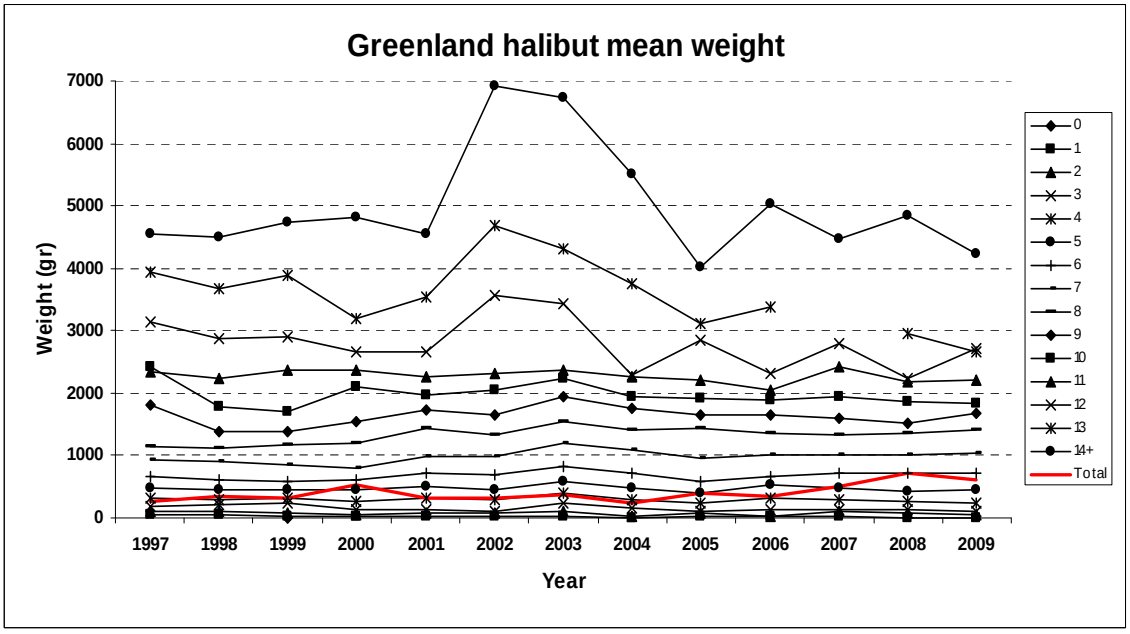

FIGURE 7.- Greenland halibut mean weight (gr) at age on NAFO 3NO: 1997-2009. Ages from 0 to 14+.

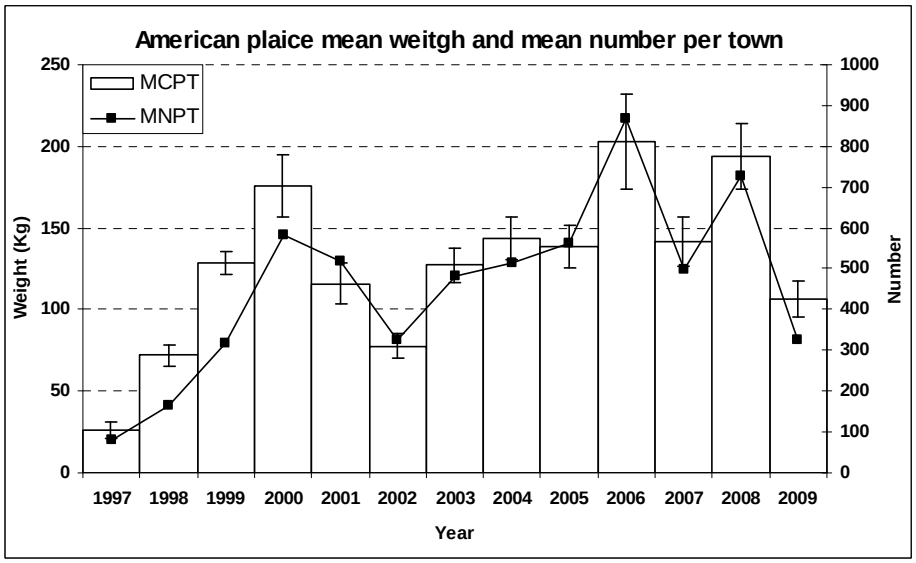

FIGURE 8.- American plaice stratified mean catches in Kg and ±SD by year. Spanish Spring surveys on NAFO Div. 3NO: 1997-2009 (1997-2000 transformed data from C/V *Playa de Menduíña*; 2002-2009 original data from R/V *Vizconde de Eza*. In 2001, there are data from the two vessels).

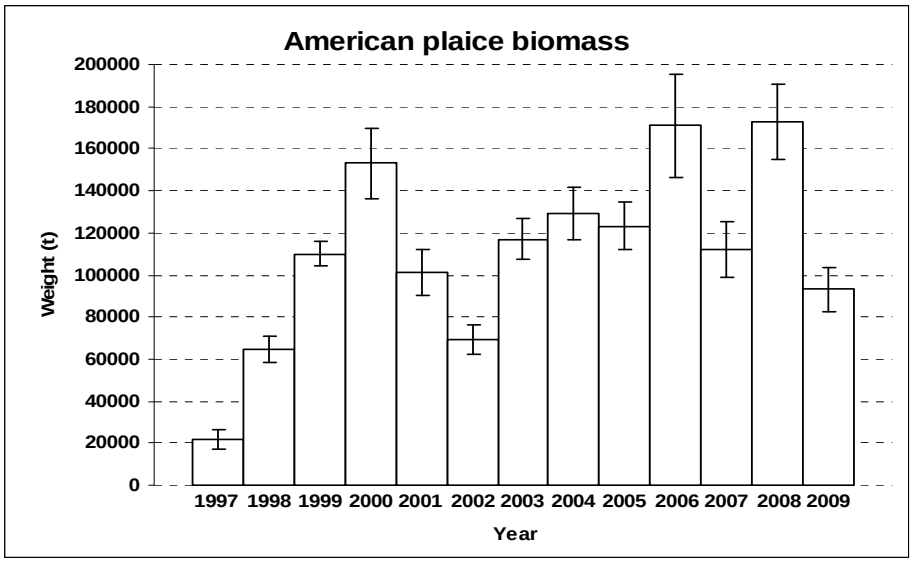

FIGURE 9.- American plaice biomass calculated by the swept method in tons and ±SD by year. Spanish Spring surveys on NAFO Div. 3NO: 1997-2009 (1997-2000 transformed data from C/V *Playa de Menduíña*; 2002-2009 original data from R/V *Vizconde de Eza*. In 2001, there are data from the two vessels).

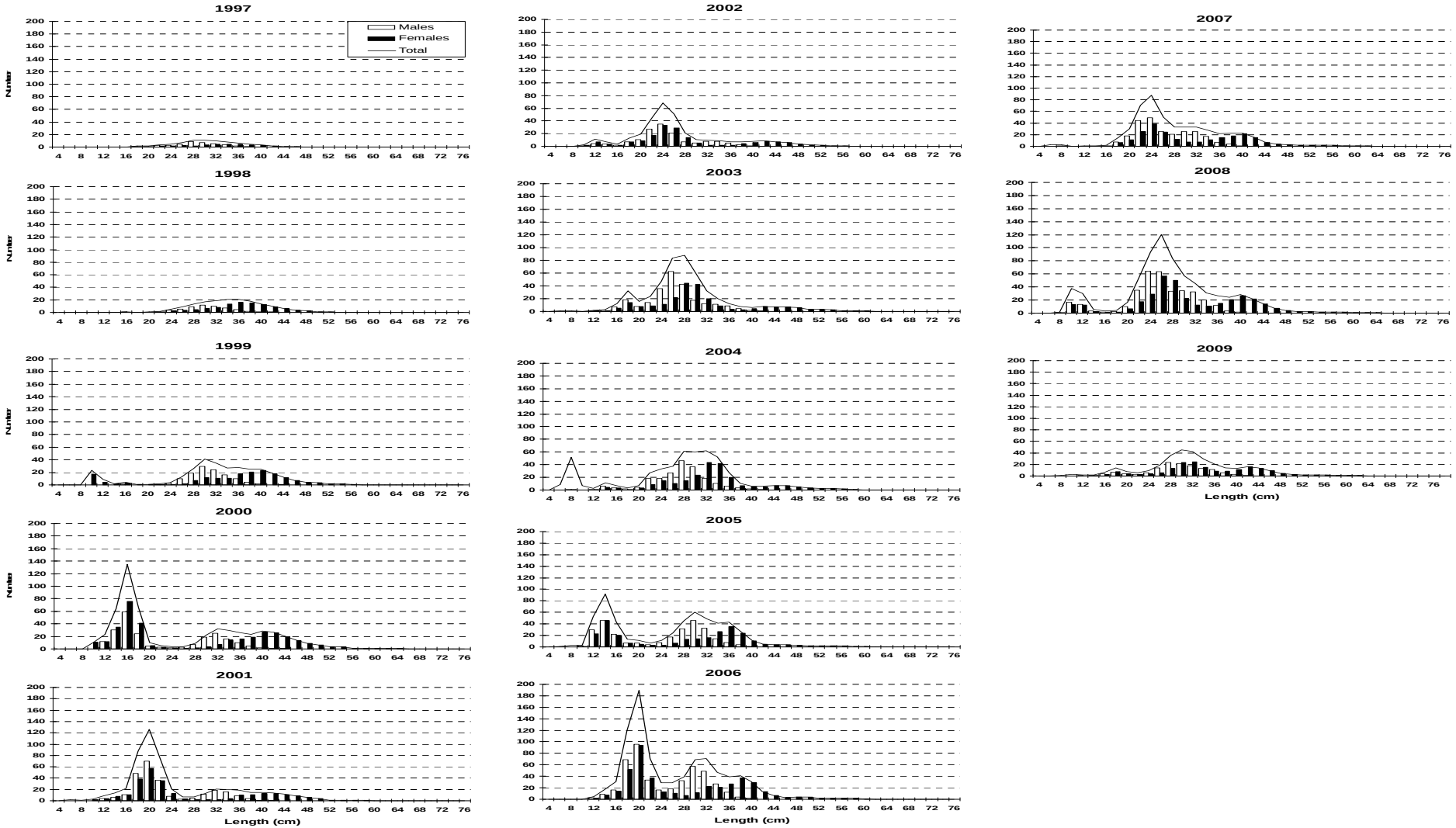

FIGURE 10.- American plaice length distribution (cm) on NAFO 3NO: 1997-2009. Estimated numbers per haul stratified mean catches. 1997-2000 data are transformed data from C/V *Playa de Menduíña*, and 2002-2009 data are original from R/V *Vizconde de Eza*. In 2001, there are data from the two vessels.

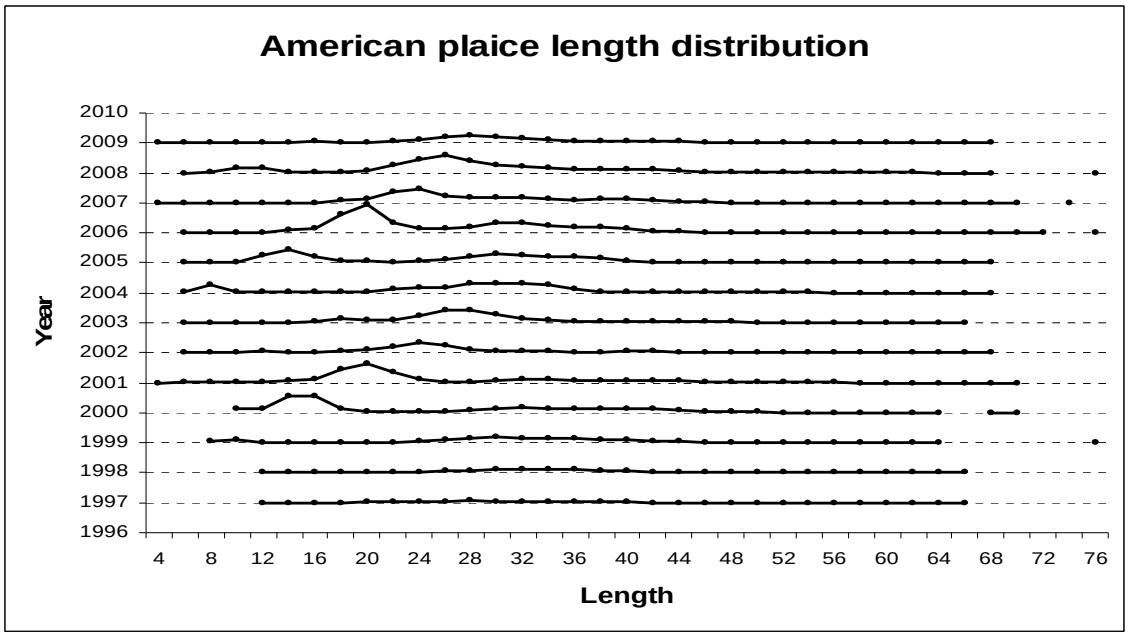

FIGURE 11.- Series of American plaice length distribution (cm) on NAFO 3NO: 1997-2009.

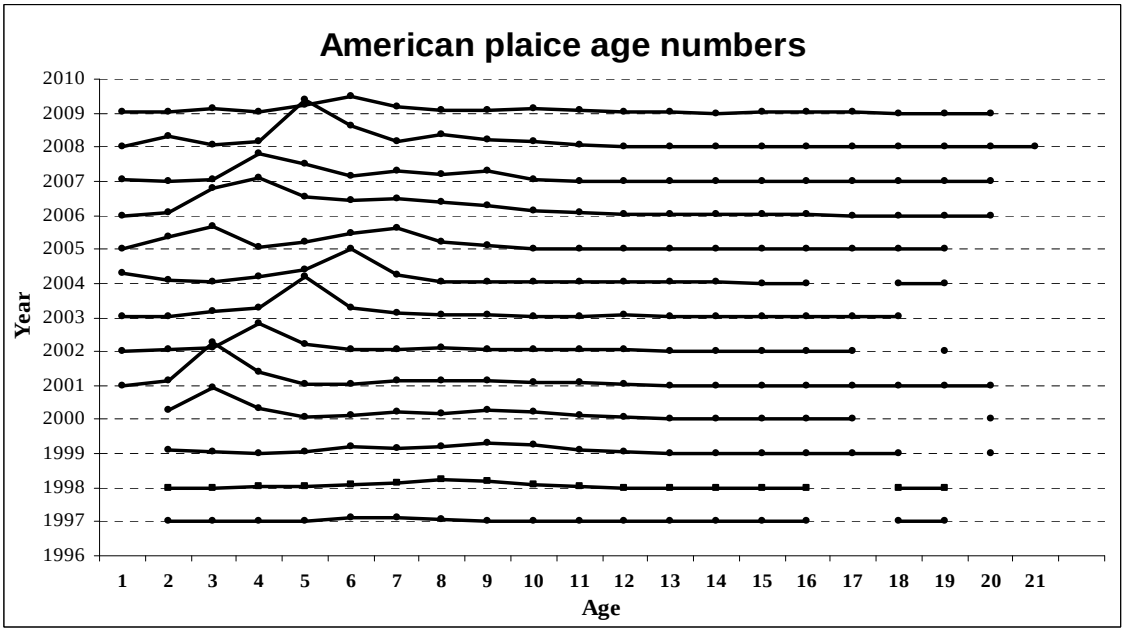

FIGURE 12.- American plaice age distribution on NAFO 3NO: 1997-2009.

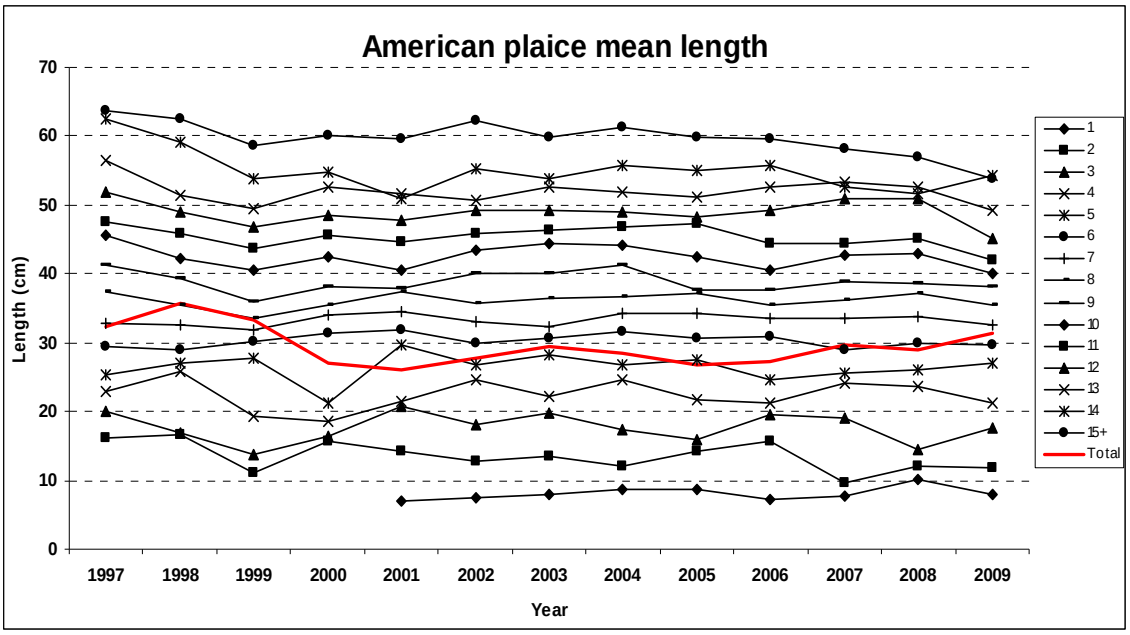

FIGURE 13.- American plaice mean length (cm) at age on NAFO 3NO: 1997-2009. Ages from 1 to 15+.

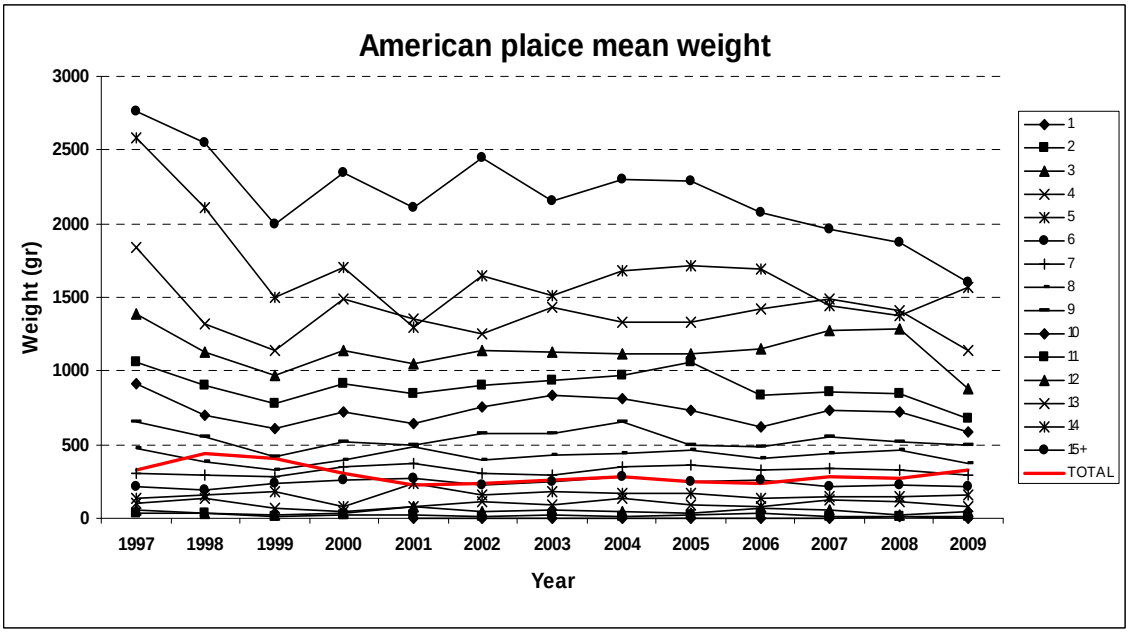

FIGURE 14.- American plaice mean weight (gr) at age on NAFO 3NO: 1997-2009. Ages from 1 to 15+.